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Agricultural.

NOTES BY THE WAY.

A Run into Oakland County—The Country Near Highland, on the F. & P. M. Railroad—The Shorthorn Herd of A. DeGarmo.

On Thursday, May 10th, we paid a short visit to some of the farmers in the vicinity of Highland, but owing to the heavy showers of rain that seemed to keep out of the way until the unwary traveler was enticed into trusting himself outside of shelter, and then pouncing upon him, we did not get a chance to call upon a number whom we fully intended to drop in upon. Mr. J. S. Bamber was in waiting at the station, and in a sharp shower, we set out for his place. The country here is nicely rolling, but the soil is rather light and needs careful handling to keep it at its best. Still we saw one piece of wheat, owned by a Mr. Kelly, that was as fine as anything we have seen this season. It is an excellent soil for sheep, as they thrive upon it and the soil needs them. As we rode along we saw one man plowing in the rain, and as more or less rain had fallen for three days previous, it showed how much it was needed and the quickness with which it was absorbed by the thirsty soil.

Arriving at Mr. Bamber's, we found the shearers at work on his flock of fine wools, most of which had been denuded of their coats; but as our space is very limited this week a description of his fine flock will have to be deferred for the present. The rain having ceased for a time, we went over the buildings and sheep barns. A few minutes afterward it suddenly grew very dark, the wind began blowing with great violence, and rain and hail crashed against the buildings as if they would crush them. It seems a small piece of the tornado that visited Lansing had got separated from the main body, and spent its fury near Highland. The storm appeared over, and with Mr. Bamber we started to call upon Mr. A. DeGarmo, who resides within a mile of the station. We found him in his pasture looking after his herd of Shorthorns, which appeared to be enjoying the first feed of new grass. The herd comprised some twenty-four head, and are in good condition. Two large, fine-looking cows, red in color, are handsome animals, with broad backs and deep bodies, and carrying udders that showed their quality as milkers. One of these is a daughter of 12th Duke of Oakland 19549, a bull bred by A. S. Brooks, of Novi, sired by 11th Duke of Hillsdale 13987, and out of Rose of Oakland by Gen. Grant 5676. Her dam was Fanny 5th, a cow bred by H. E. DeGarmo, and out of Fanny 2nd, by Duke of Oakland 19546. Near them stood a large roan cow, with straight lines and well-shaped quarters. Her small, neat head and horns, thin neck, well-shaped udder carried well forward on the body, made her a representative dairy cow. She is called Fanny 20th, and is out of Fanny 11th, by Plumwood Lad K. 27453. A fine red heifer, only two years and a half old, a handsome animal, had recently calved, and the calf is a beautiful one. Tulip 10th, (Vol. 19, p. 14858) one of the red cows mentioned above, is nearly four years old, was bred by Mr. DeGarmo, the present owner, and was by Red Jacket 23642, out of Tulip 4th, by 12th Duke of Oakland 19549. Two large cows were pure white in color, and very taking in their style and appearance, but as Shorthorns must now be reds or roans to attract attention, a white animal of the most perfect symmetry is always passed by purchasers. Mr. DeGarmo says one good thing about them is that they have always, with one exception, produced roan or red calves.

The oldest cow in the herd is a deep red, well advanced in years, but still vigorous and hearty, and suckling two fine calves that showed they were not subjected to short rations.

The bull at the head of this herd is Oxford Prince 3d 46716, by Red Prince 24568 out of Oxford's Rose 2d (vol. 18 A. H. B.), by 23d Duke of Airdrie 19393. He is a deep red in color, with a little white, in only fair condition, but a very fine animal. He has a good head, sufficiently masculine to denote character, with the Airdrie horn. His lines are straight, and his whole appearance very taking. He is now three years old, and Mr. De Garmo is well pleased with his stock, a number of which we had the pleasure of examining.

This is one of the pioneer herds of the State, established by Mr. H. E. De Garmo, father of the present proprietor, when Shorthorns were more of a rarity in Michigan than now, and we are pleased to see that the character of stock bred keeps up well with the progress of the breed in the State. Some of the young things give promise that they will be heard from in the future.

After a pleasant evening, Mr. De Garmo drove over to the station, between showers as it proved, and we returned to Detroit with very pleasant recollections of our short visit.

SCIENTIFIC SEED SELECTION.

When excellence is desired in any of the branches of human needs, and the mind can exercise its choice in the selection of the specific article best adapted to the want, with what care is each specimen examined, and its adaptability considered in relation to its value to the possessor! The history of its past success or failure is duly considered. Is its present value likely to augment or to wane? Will it meet our future wants as our increasing needs may multiply? No one quality is likely to influence our choice. Color, glitter, bulk, and kindred fancies, have ever been strong influences toward a decision, and excellence has been overshadowed by them, but when our interests are involved to a large extent in the right selection, these exterior qualities do not weigh, and we look for more potent virtues.

A large amount of investigation has been put forth, and much interest manifested in the last decade in both agriculture and horticulture, in bringing out new varieties, from a scientific and skillful selection of seeds. Hybridization has done something in this direction, but the field of greater promise lies in the direction of seed selection.

It has been found by experiment that seeds transmit to the future plant many of the characteristics of the parent stem in habit of growth, vigor, and productiveness, and that a continued selection from the ideal plant, will eventuate in a distinct variety that will continue to produce like the best of its kind. This is an interesting field for individual experiment, and promises large remuneration in both pleasure and profit. Every farmer understands the importance of a judicious selection for breeding purposes of all his domestic animals, but that seeds and grain can be as largely and surely improved in both quality and productiveness, is not so generally comprehended.

It is a notable fact that all farmers will acknowledge that corn does not have that tendency to "run out," as we call it, that is shown by a continued use of the same seed of the small grains of general production. The reason is obvious, there is a form of selection; although not the best, yet it maintains the general character of the seed, if it does not improve it. In selecting seed corn, the farmer usually considers nothing except the form, and perhaps the earliness of the ear, but disregards the growth of stalk as to its perfectness in general appearance. Every farmer should cultivate a taste for the ideal in every thing and work toward it. If his ideal corn should begin to ear out three and a half feet from the ground, and tassel out the same distance above, with a strong, well braced stalk, let him select his seed from such, and only such stalks as come up to the ideal, and bear the ideal ear. If but a dozen ears of such corn can be found, plant these by themselves, and it will be much easier the next year to get his ideal stalk and ear from this planting, and continue to be less troublesome year by year until the propotency to perfection will become an established trait in the seed. Plant the grains from the entire ear—tip and butt kernels with the rest. It requires but a short time—four or five years—to establish a pure bred variety of corn, which will materially increase the yield, largely in excess of a just compensation for the labor expended.

Selection of wheat for seed has been less carefully attended to than corn. If the seed is plump and free from foul seeds, the inquiry goes no farther. The plumpest berries may have come from the shortest heads, and probably did. Kernels of wheat that grew in a head that produced but twenty grains, will be larger than the kernels from a head that held thirty, yet the seed screen will discriminate against the prolific head, and run into the reed the grains coming from less unprolific ones, because of their greater size. This causes a continual going backward, and has a tendency to produce the effect which really does exist when the same seed is sown continuosly for a period of years. The reputation of a new kind of wheat is never long sustained. The first plantings were carefully made, the expensive seed was distributed over more ground, and each plant had an equal chance, and produced its wonted fold, but when the seed becomes more plenty and therefore less expensive, it is distributed with a lavish hand, and degeneracy begins—weak plants furnish their full quota of the seed and as like begets like, a tendency toward retrogression is begun which increases with each planting, until such a point of unproductiveness is reached that it no longer pays to sow it. The old Soules wheat of 30 years ago, the Deihl of 20, and the the Treadwell of a later period, are instances of this gradual decline. No sensible reason can be given for this lapse in production, except the one outlined above. Taking this view of the cause, there seems a very natural way, and therefore a scientific one, to remedy this tendency to "run out." Instead of considering the big kernels the best, let the farmer go to the wheat fields when the head and seed are fully formed, and select those heads that seem well filled, noting how many there may be coming from the one stool, as this will indicate a prolific quality if they are above the usual number. A person will soon become an expert in detecting the desirable heads, and in a day's work will gather a sufficient amount to make respectable showing for the experiment. This seed—threshed by hand—should be put in the drill when the sowing begins, and run out before more is sown. The space can be staked out and the next season's selections made from this plat. Continue the selection until you have the desired type well established. The experiments already made have demonstrated the fact that this process, carefully extended over a few years, will bring out a distinct breed of wheat that will yield largely in excess of ordinary grain. A gentleman in Ohio has bred a potato up to so prolific a point, that the seed is in great demand. Prepotency toward perfection is so bred into the variety that they outyield any other sample of the same kind.

It is but a few years since pedigree seeds began to be talked about, and farmers may consider that their production is too intricate a process for them to attempt, with any degree of certainty of succeeding, while in fact nothing promises to so readily yield to man's designs, and to bring to his harvest not merely a crop of fancies, but a liberal reward for his labor in added sheaves. A. C. G.

AMBER CANE.

How the Sandy Soils of Michigan May be Utilized.

To the Editor of the Michigan Farmer.

The question is often raised, what shall be done with our sandy soils, both the stump lands left in lumbering and the so-called "plains" of our northern counties? If some crop could be found, of large value in itself, capable of being converted into material in general demand, especially adapted to light sandy soils, and capable of withstanding summer drought, the problem would approach a solution. Without claiming that such a plant has been discovered, I wish to call the attention of farmers on light sandy soils to the Amber cane, or sorghum, as a plant full of promise in this direction. It is a plant that grows well on soils too light to produce a good or paying crop of corn, will withstand the effect of summer drought far better than corn, so that it will grow and ripen under circumstances where corn will burn up, and its value as a source of sirups and sugar, and as a forage crop, is only beginning to be appreciated.

While sorghum will make a large and vigorous growth on heavy soils and those containing abundance of organic matter, the value of the sugar products from such soils is less than on sandy soils which are deficient in vegetable matter. The sirup made from Amber Cane raised on such light soils is lighter in color and superior in flavor to that made from cane raised on rich soils. The roots of the cane penetrate deeply in sandy soils, and it is thus able to withstand dry weather in summer much better than corn.

As a forage crop, it is of great promise because it is very nutritious, and is eagerly consumed by stock of all kinds. The seeds of cane are equal in value, pound for pound, to oats or corn.

The plant being so well adapted to sandy soils, and of so much value in itself, it remains to be determined whether it can be successfully raised on light sands, and especially on "the plains." I do not ask any one to make a large outlay to determine this question, but ask as many as will to raise one or two square rods of sorghum, on various kinds of sandy soil, and especially very light sands, and let me know the result at the end of the season, or when the seeds are ripe. Let me know how many pounds of stalks grow on a square rod, and let me have two or three joints of the stalks for analysis, that I may determine the value for sugar making, and I will publish the result of the whole inquiry, giving each one credit for his work.

I want the canes to be raised without manure, except the use of a small handful of wood ashes to each hill, or a tablespoonful of superphosphate to the hill. In the report I want it distinctly stated what manure, if any, was used.

The seed should be planted by June 1st if possible, in hills three feet apart each way, and four stalks left in each hill. Plant shallow, and cultivate the same as corn. When the stalks are ripe and the seeds black, cut off the stalks close to the ground, cut off the head with about one foot of the top of the stalk, and weigh the canes in this state.

If it can be shown that Amber cane will make a good growth on these very light and unpromising soils, if we can raise a forage crop when grasses fail, and if we can turn these glittering sands into bright crystals of sugar, we may sweeten the lot of the pioneer in more senses than one. Let each one contribute something to this end, and definitely settle, if we can, the possibilities of these unpromising soils.

R. C. KEDZIE.

Agricultural College, Lansing, May, 1883.

Since writing the above, Prof. Kedzie has called at the Farmer office, and left a sample of sugar from Amber cane grown at the Agricultural College. He was very sanguine that the day was not far distant when Michigan would produce all the sugar and syrups needed within her borders. The sample of sugar was a light brown color, its crystals sharp and clear, and the flavor equal to any cane sugar of the same grade. If refined it would pass current anywhere as a first-class article. As to the cost of growing the cane and making the syrup, the professor said he could not speak advisedly, as in his experiments student labor had been used, and it was difficult to fix its value, but he was confident that syrups, equal to the best now to be had, could be produced at 25c per gallon. He thinks farmers who are settled on light soils should experiment with Amber cane, as its value is far in advance of grain crops. He speaks especially of sandy soils, because while they will not produce such a heavy growth of cane the quality of the syrup is superior to that grown on heavy soils, and also because it will utilize a large amount of land in this State that is now comparatively worthless. We feel convinced from what we have learned of the Amber cane that it is well worth the attention of the farmers of this State.

The Texas *Wool Grower*, published at Fort Worth, is doing a great service to the wool growers of that State, and every issue is well filled with matter of much interest to sheep men. In its last issue it gives the following sound advice to its readers:

"The difference between Mexican wool and about the second cross by the Merino, in the value of the staple by the pound, is ten cents per pound and upwards. The difference in weight of fleece is double and sometimes treble the quantity. If you have the Mexican sheep or low grade, light shearers of any mongrel breed, you must improve, and if you are not financially prepared to do so, go to a wool merchant and talk to him for awhile, asking if the estimates above are nearly right, then go home, sell sufficient of your flock to buy good rams and place yourself in a position to go into the business right."

SHEEP SHEARING.

To the Editor of the Michigan Farmer.

The first public shearing of the Lapeer County Sheep Shearing Association was held on 10th of May, at the barn of Mr. Calkins. The following table gives the result:

THOROUGHBRED RAMS.

Name of Owner.	Age.	Days' Growth.	Weight	Carcass.	Weight of Fleece.	No. of Sheep
E. S. & F. B. Hough	4	365	112 08	21 12		231
THOROUGHBRED EWES.						
F. M. Haines	5	351	92 00	15 00		80
G. O. Hough	8	365	56 00	11 00		75
F. M. Haines	1	410	74 08	13 10		56
do	1	410	60 04	11 15		54
do	2	350	91 00	11 15		19
do	5	351	95 00	13 07		53
G. O. Hough	8	365	64 08	11 09		134
T. B. Hough	8	365	63 00	11 11		141
W. C. Blow	6	350	99 00	12 13		13
G. O. Hough	3	365	58 00	12 04		88
GRADE RAMS.						
E. S. Hough	1	410	84 08	14 14		33
G. O. Hough	2	370	72 08	21 05		29
E. S. Hough	1	406	81 00	15 00		64
L. Y. Struble	3	378	101 08	19 14		....
E. S. & T. B. Hough	4	370	148 00	23 12		100
T. B. Hough	1	370	79 00	10 5		91
C. D. Hough	1	380	53 00	11 12		92
do	1	380	50 00	11 05		90
GRADE EWES.						
G. O. Hough	2	365	59 00	11 07		65
T. B. Hough	1	406	60 00	12 09		67
do	1	419	56 00	12 06		64
E. S. Hough	1	420	73 00	14 01		15
G. O. Hough	1	411	49 00	10 05		37
do	3	370	67 00	15 04		13
T. B. Hough	1	418	48 00	12 06		35
G. O. Hough	2	378	58 00	12 04		63
do	1	426	59 00	12 02		40
E. S. Hough	5	365	68 00	14 13		03

E. S. HOUGH, Secretary.

Stock Notes.

Mr. Rock Bailey, of Union, Ont., has sold the stallion recently advertised by him in the Farmer, to Mr. H. H. Julien, Colchester, South Essex, Ont. The price realized was a very handsome one.

The following note has been received from Mr. J. F. Hagaman, breeder of Shorthorns at Romeo: "Your correspondent was misinformed as to the ages of Shorthorn heifers lately purchased by Mr. James Crawford, of Armada. The two bought of me were as follows: Bright Eyes, 18 months, $175; Prudy, 14 months, $200."

Mr. B. F. Batcheler, of Oceola Center, Livingston County, reports the following sales from his herd of Shorthorns:

To Robert Browning, Oceola Center, Livingston County, the heifer Leah, got by Young Mary Prince 34156 out of Roxie 2d, by Oceola 17868.

To Wm. Sleaford, Brighton, Livingston Co., the young bull Roxie's Lad, by Young Mary Duke 45227, out of Roxie 2d, by Oceola 17868.

To James & Wm. Green, Deerfield, Livingston County, the bull Oxford Lad, by Oxford Duke 40181, out of Sprightly 2d, by Oceola 17868.

To M. A. Grow, Highland, Oakland County, the bull Young Mary Lad 45232, by Young Mary Prince 34156, out of Geneva Rose, by Duke Geneva 22631, running to imp. Young Mary, by Jupiter 2170.

Mr. J. M. Turner, of Lansing, has recently purchased the following Herefords from the herd of F. W. Stone, of Guelph, Ont.:

Tredegar Beauty 2d, calved June 5, 1881. Got by imp. Portrait 3d; 1st dam Beauty 2d by Triumph 2d; 2d dam, Beauty by Holmer; 3d dam, Hazel by Tom Boy; 4th dam, Hazel.

Hardy Duchess, calved May 23, 1881. Got by Duke of Manchester; 1st dam, Hardy 10th by Dauphin 4th; 2d dam Hardy 3d by Renown; 3d dam, Hardy by Zealous; 4th dam, Helen by Beefy Ben; 5th dam, Heiress by Cholstrey; 6th dam, Hebe by Zest of Oxford.

Perfection 11th, calved June 29, 1881. Got by Benjamin 12th; 1st dam, Perfection 8th by Governor 4th; 2d dam, Perfection 3d, by Sir George; 3d dam, Perfection 2d by Sir Colin; 4th dam, Perfection by Witchend 2d; 7th dam, Primrose by Riff-Raff; 6th dam, Peeper by Young Confidence; 7th dam, Fairmaid by Dayhouse.

Wool Notes.

Mr. J. W. Nolan, of Kinney County, sold last week 7,030 pounds of fine medium six months' wool to Berge & Bros. at the Sunset railway depot, for 22½ cents.—*Texas Wool Grower.*

Mr. Levi Arnold sends the weight of fleece of his ram Prince Bismark, bred by L. W. & O. Barnes, of Byron, Mich., and sired by Wm. Ball's Star Bismark. The fleece was weighed in the presence of a number of parties, and turned the scale at 34 lbs. 10 oz., which Mr. Arnold claims gives his ram the second place as a heavy shearer in Michigan.

Mr. Wesley J. Garlock, of Howell, sends the following notes about his Shropshires: "My sheep sheared over 6 lbs per head and every ewe has a lamb and many of them two. I have one ewe that sheared 10 lbs. and has a lamb now two and a half months old that weights 65 lbs.; my lambs will average at least 40 lbs. now apiece, and are not over 6 weeks old on the average."

A subscriber at Climax, Kalamazoo Co., sends us a report of the shearing of the flock of Mr. J. T. Retallick, of that place. He sheared seventeen two and three years old, of his own raising, which averaged 15 lbs. per head—the heaviest one cutting 19 lbs. 8 oz. Most of them have lambs. They were all sired by a ram bred H. Merle Bottom, of Shaftsburg, Vt., and now owned by Messrs. Lovell and Retallick. The old ram cut 28 lbs. 12 oz., and two two-year-old rams from him, bred and owned by Mr. Lovell, sheared 23 lbs. 8 oz., and 25 lbs. respectively.

N. L. Miller, of Beach Grove Stock Farm, Saginaw, has recently sold to L. B. Smith, of Tawas City, a Stapleton Lass heifer; also a yearling bull, sire, Victoria Duke 5th, he by the 23d Duke of Airdrie. Also to same, two Poland China breeding sows.

The Texas *Wool Grower* gives the record of the shearing of the flock of full blood Merinos owned by McIlhany & Daugherty, of Callahan County, that State, which we copy as of interest to our Michigan breeders:

"The old flock of full-blood breeding ewes belonging to this firm, without food other than a small quantity of cotton seed, and what the range afforded in sunshine or rain, in winter and summer, sheared from 10 to 15 lbs. the average being better than twelve pounds. The lambs sheared from 10 to 13 pounds, and bucks made a good average of twenty pounds. Allowing that this flock stood the Texas weather, winter and summer, and considering that the whole wool crop in Texas is light, these weights are equal to the average of the best flocks of the Northern states. The staple shows uniformity, is long and fine without a break."

Creamery Butter.

The past week Mr. John E. Day, of Armada, Macomb County, proprietor of the Spring Brook Dairy Farm, brought a sample package of his butter into the Farmer office. It was well sampled by quite a number and declared all right in respect to flavor, quality and color, and with a waxy texture, and a fine nutty flavor that left nothing to be desired. Mr. Day has recently started into this business, but finds a ready market for all he can make at fair prices. If he keeps up the quality of his product, he will never be short of customers among the lovers of good butter. We would like to see, Michigan producing a large quantity of such butter, and she has every facility for doing so.

Farm Law.

Inquiries from subscribers falling under this head will be answered in this column if the replies are of general interest. Address communications to Henry A. Haigh, Attorney, Seitz Block, Detroit

THE DRIVEN WELL PATENT HELD INVALID.

Many of our readers will be interested in learning that the celebrated "Driven Well patent" owned by Col. Nelson W. Green, has been held null and void by the United States Circuit Court for the District of Iowa. The opinion in full has not yet been received, having been only very recently delivered; but it is understood that the grounds for the decision are: 1st, abandonment to the public for several years before the patent was applied for; 2nd, priority of use, and 3rd, the want of novelty. The court holds the reissue of the patent is void because it grants more and broader claims than the original patent covered. This is a very sweeping decision. It may be the beginning of the end of a very long and hotly contested litigation. Suits have been begun against hundreds of alleged infringers all over the country. The patent has been sustained in several cases. An appeal from a decision of the United States Circuit Court for the District of Indiana to the Supreme Court resulted in an equal division of that court, which under the law sustained the decision of the lower court. This can not happen again, as the Supreme Court can not be equally divided, it now having nine members.

The driven well patent was granted to Col. Nelson W. Green, of Boston, in 1868, and reissued in 1871. It claims the process of constructing a well by driving or forcing an instrument into the ground until it reaches water, without removing the earth upward as in boring. It also claims the right to the pump and pipe constituting an air-tight well. The patent has been sustained on the ground that although tubes were driven into the ground to reach water, long before the Green patent was issued, still the principle of the vacuum, as claimed in the patent, was not known; and the chance application of a principle by one who does not know of it, or the ignorant use of a device which by chance utilizes a principle, will not prevent one from obtaining a patent on a device which for the first time makes intelligent use of a principle, and renders it valuable to mankind.

On the other hand it is claimed that the operation of the principle of the vacuum is largely a myth, that the driven well will work just as well if another tube is driven down alongside of it, thus letting the air into it and defeating the alleged action of the vacuum. Indeed, this ingenius method of seeking to evade the patent has often been made use of.

The writer has always maintained that when all the facts in the case are made known the patent will be found to be invalid. This recent decision in Iowa, and a still more recent one at Indianapolis by Justice Harlem of the U. S. Supreme Court, denying an injunction, go to show that this belief is well founded. There are many suits now pending in the State for infringement of this patent. The defendants have wisely formed an association for mutual defence, and this State Grange has kindly rendered assistance in the matter. These suits may never be pushed any further; but if they should, or if there should be any further attempts on the part of agents of the alleged patent to bulldoze farmers into "settling" more claims for infringement of it, the above facts should be borne in mind. H. A. H.

Horse Matters.

Care of Sick Horses.

From an address delivered by W. L. Williams, V. S., before the Illinois Industrial University, we make the following excerpts:

"In the cure of disease, judicious care and gentle nursing form two of the most essential parts of the treatment, sufficing themselves to carry the animal through many milder form of disease without the aid of medicine. Especially is this true in most cases of such epizootics as our pinkeye, as it occured in the country, where the animals could have plenty of pure air. In this disease three of the most noticeable symptoms were constipation, inflamed eyelids and painfully sore legs. The constipation could be overcome by grass, bran, scalded oats; the inflammation of the eyes could be lessened by keeping them darkened, and bathing occasionally with cold water, and the stiff, painful legs could be benefited by fomenting with warm water and applying flannel bandages afterwards, while the self-limited disease ran its course in a few days and all was well.

"Good shelter and bedding are among the first essentials to successful treatment. If a horse falls in the road and cannot rise, no time should be lost in loading him on a sled or some boards and conveying him to comfortable quarters, or if this should be impracticable, make a shelter over the animal as he lies.

"Good bedding for a prostrate animal or one getting up and down a great deal, is absolutely necessary if you wish the animal to recover without having bad bed sores. Numerous cases have come to my notice where animals have taken colic or diarrhœa or other form of disease while on the road, and instead of stopping the animal as soon as noted to be amiss, the driver continues his journey for several miles, making the case so much worse by the work that no amount of skill might suffice to save the animal; when, had he stopped the animal at the first and allowed it to rest quietly, even without any treatment at all, it would quite likely have recovered.

"In the various fevers much comfort and good may be done the animal by hand rubbing and bandaging the cold limbs, while constipation of the bowels, which is so commonly present, may usually be safely and effectually relieved by warm bran mash, flaxseed meal, green grass or other laxative diet.

"The sick animal is usually dainty about his feed, and should be allowed only light, easily digested food, trying various kinds and allowing as a rule what he likes best, avoiding too much at a time, as he is apt to turn against a food if some of it is allowed to lie in his feed box until becomes dirty and sour.

"In excessively sore throat, when solid food cannot be swallowed, the animal frequently derives great benefit from bran tea or gruel, or still better, most animals in such condition will drink fresh milk freely if it is allowed them, being apparently more easily swallowed than water; it is nutritious, laxative and very easily digested, and will frequently do more towards carrying a colt through distemper, with bad sore throat, than all the medicine you can give it."

Seven Year Old Horses.

An old farmer once said: "What a year it must have been for colts seven years ago this spring." No person who has never attempted to buy a horse can appreciate the remark, but if he will let it be known that he wants to buy a good horse, he will be struck with the circumstance that all the horses that are of any particular account were born seven years ago. Occasionally there is one that is six years old, but they are not plenty. Now, those of us who lived around here seven years ago did not have our attention called to the fact that the country was flooded with colts. There were very few twin colts, and it was seldom that a mother had half a dozen colts following her. Farmers and stock-raisers did not go around worrying about what they were going to do with so many colts. The papers, if we recollect right, were not filled with accounts of the extraordinary number of colts born. And yet it must have been a terrible year for colts, because there are only six horses in Milwaukee that are over six years old, but one of them was found to have been pretty well along in years when he worked in Burnham's brick yard in 1848, and finally the owner owned up that he was mistaken twenty-six years. What a mortality there must have been among horses that would now have been eight, nine or ten years old! There are none of them left. And a year from now, when our present stock of horses would naturally be eight years old, they will all be dead, and a new lot of seven year old horses will take their places. It is singular, but it is true. That is, it is true unless horse dealers lie, and we would be slow to charge so grave a crime upon a useful and enterprising class of citizens. No, it cannot be, and yet, doesn't it seem peculiar that all the horses in this broad land are seven years old this spring? We leave the subject for the youth of the land to ponder over. It beats us.—*G. W. Peck, in U. S. Veterinary Journal.*

The Walking Horse.

The country would reap incalculable benefit if the walk of its ordinary horses could be accelerated a single mile per hour beyond what is now general. It would put millions of dollars extra into the national pockets every year. We might have horses which would walk five miles an hour just as naturally and as easily as three to three and a half, and rarely four, as is now the rule. All the farm and much of the country road and town street horsework is done at a walk. It costs no more to feed a smart walker than it does a slow, logy one, and frequently not so much. Now, let any one calculate the profit and advantage of using the former in preference to the latter. Let the farmer see how much more land per day he can get plowed and harrowed; how many more loads of hay, straw, grain and vegetables he can take to market; and how much more rapidly he is able to accomplish all his other work, and he will have little patience in keeping a slow walking horse any longer. It will be the same with the expressman, the teamster and the truckman.

Bellfounder, got by the celebrated imported trotting horse of his name, out of Lady Allport, was not only a fast trotter, but had a natural, easy walk of five miles per hour. Nearly all his stock, out of quite common mares, proved excellent walkers. This shows how easily and rapidly an increased fast-walking stock may be bred by farmers, if they will only take due pains to select the stallions to which they may hereafter nick their mares. A fast walking horse commands a considerably higher price with those who care for the pace than a slow walker, and such buyers are constantly on the increase now, and that day will come by and by when a slow walker will hardly get a bid. The fastest walk that I have yet seen exactly timed and placed on record was that of the English horse Slove. He made, without extra effort, 5.69 miles per hour. All agricultural societies should give good premiums to fast-walking horses, the highest prize to be awarded to the horse which walked five miles per hour; the second to four and one half miles; the third to four miles. The last should be the least time to which to award a prize, and all breeds should be allowed to compete.—*N. Y. Tribune.*

Horse Notes.

THE Indiana *Farmer* says that Nellie Kellis and Mag, trotting mares undergoing a course of preparation at Columbus, Ind., for the spring races, were recently given three pints and a half each of castor oil, for the purpose of physicing them, and they died from the effects of the overdosing.

FUGUE, full sister to Furor, recently purchased by Messrs. Dewey & Stewart, of Owosso, won the three-year-old stakes at Louisville last week in three straight heats; time, 2:45, 2:43¼ and 2:34¼. Two heats were trotted the first day, and then it rained so that the race had to be postponed until the third day, and then trotted in the mud.

A GOOD MULE STORY.—A mule at Stockton, Cal., suffered a dislocation of the fourth, fifth and sixth vertebræ of the neck, and was about to be killed, when a veterinary surgeon concluded to experiment with him. The animal was placed in slings, and a tackle fastened to the head. A number of men manned the rope, and after several strong pulls, the dislocated vertebræ slipped into place.—*San Francisco Chronicle.*

IF the following story, which we find in the Saginaw *Courier*, is not true, it ought to be, as the horse editor of that paper always carries a hatchet with him: "A reliable friend tells us about a horse that felt sick in the night, and, breaking out of its stable, made its way to the stable of a veterinary surgeon who had before treated the animal for sickness. It stood there several hours awaiting the opening of the stable in the morning, and when admitted soon fell dead."

The Farm.

SHEEP FOR MICHIGAN.

Middle Wools or Fine Wools, Which?

HOWELL, May 10th, 1883.

Editor Michigan Farmer.

DEAR SIR:—Having noticed the interest manifested by the FARMER on the sheep question of late, by your courtesy I take the liberty of bringing out a few points in favor of the Shropshires, and thus far omitted by the FARMER. It is plain to be seen that the FARMER inclines to the fine wools, and when we consider the moneyed interest represented in the State by the fine wool, it is not surprising that an organ represents that interest as well as the FARMER does.

Fine wool men look to you as their advocate and support, which is all right, provided you do not go a little over the line in heralding the Merino as the mutton breed over all others. Quotations taken by the FARMER from the Buffalo papers, showing the relative price of mutton in Buffalo the past three years, show the gradual advance in that commodity. They show also, that for well-fatted, *heavy* mutton sheep, sellers have been nearly able to make their own prices, while for the light, inferior sheep, buyers have been able to make their prices. Since 1876 I have had some experience in breeding and handling mutton sheep, Down sheep at that. It has been a satisfaction to me to settle in my own mind facts as to the relative merits of fine wools and coarse wools, and with your patience, I would like to bring up extracts from different papers that I have been able to pick up bearing on this point.

It must not be forgotten by readers of the FARMER that through your paper you said, a little over a year ago:

"We agree with Mr. Garlock, that there is undoubtedly plenty of room for *good* mutton sheep, and to those who want a mutton sheep we believe the Shropshire Down will be found more suited to Michigan and its farm system than any other breed or variety."

The *Breeders' Gazette*, of Chicago, not long ago said:

"Of the sterling worth of these sheep, and of their adaptability to the wants of the general farmer in almost any part of the country, too much can scarcely be said. There is cause for the general complaint that Americans are not a mutton-eating people, in the fact that very few Americans have ever eaten mutton of good flavor. Englishmen declare such stuff unfit to eat, and we are scarcely prepared to deny the assertion."

The *Farmer's Review* not long ago had this:

"The English flockmaster has settled two points in British experience: 1st, that mutton is more profitable than wool, and 2nd, that among English mutton consumers there is a decided preference for Down or black-faced mutton. Tender, juicy flesh with a fine grain and rich flavor, ripe and yet carrying plenty of lean meat, is that which suits the English market. This preference on the part of buyers is so marked that the butcher is enabled to give at least two cents a pound more for dark-faced mutton than for any of the white-faced and long-wooled sheep."

The London *Agricultural Gazette*, July 18th, 1881, says:

"These sheep were undoubtedly the feature of the fair; in numbers they dwarfed every other breed. The Shropshire no doubt appeared on his own ground, as he has shown himself to be the sheep of the midland counties. Its advance has been due to its intrinsic merits as a profitable sheep to the tenant farmer."

The Kentucky *Live Stock Record* says by E. C. Morgan (a Canadian shipper of beef and mutton):

"In England they prefer the black-faced sheep. I would give two cents a pound more for a good cargo of black-faced sheep than for other kinds. The Southdown, Shropshire and Oxford Downs are the best. The English butchers leave the skin on the legs, so as to convince their customers that they are selling them Down mutton."

The *Canada Farmers' Advocate* said a a year ago:

"The Shropshires are looked on as the coming sheep of Canada. The demand for the long combing wool is not at all equal to what it was a few years ago, and the demand for wool of a finer quality is now rapidly increasing and sells higher. Also the quality of mutton of all the Downs is superior to that of the Leicesters, Lincolns and Co'swolds, and the real judges of good mutton will and do pay higher prices for this class of mutton than for the large, heavy, tallowy mutton. One or two cents per pound used to be the difference in price when we resided in England. The quantity of Down mutton as yet procurable is so small as compared to Merino, Leicester and Cotswold that very few Americans have ever had a chance to taste a fine piece of mutton in their lives. As soon as they do and a supply can be had, you may expect to see or hear of prices being paid for legs of mutton such as you never dreamed of, for Americans, as soon as they really know what is the best, will not spare money to have it on their tables."

The New York *Tribune* last fall said of the fat stock show at Chicago:

"The sheep display was far and away the best yet made. The Shropshires were in the lead as regards numbers, and probably in the interest excited; some of these had large size, some weighing 270 pounds. A few Merinoes and their grades showed the possibility of making them fair mutton sheep."

The *Post and Tribune*, Detroit, last fall published this:

"The Shropshire is a mutton breed of sheep, and a producer of a long staple of medium wool. This sheep has a vigorous constitution, a compact fleece, matures early, a fine form and the best quality of mutton. They are great feeders and the ewes are very prolific, producing 40 to 50 per cent. of twins, and as they are great milkers they raise these twin lambs well. Those who know them have unbounded praise for them, and the general opinion among those interested in mutton breeds is that the breed stands among the best."

From the Michigan FARMER, I think, this winter I clipped this little item:

"The Buffalo *Mercantile Review* says: 'The sales of Tuesday included a deck of Shropshire lambs, fed and shipped here by Mr. Silas Barker, of Jonesville, Michigan, that were pronounced by dealers generally as perfect a bunch of stock as ever stepped foot in the Buffalo yards. They averaged 107½ lbs, and brought $8.00 per cwt.'"

Now, Mr. Editor, if all this proves *anything* it proves that the Shropshire sheep is no *mean* animal. Every breeder is quick enough to accept English testimony in favor of the Shorthorn.

The editor of the FARMER has faithfully urged its readers to breed the quick and early maturing steer of two years instead of four years; as was clearly demonstrated at the last Fat Stock show, the first would pay a handsome return on feed and keep, while the four-year old barely paid the expense of keeping. The same principle applies to hogs and sheep; the early maturing animal overtakes and leaves behind the animal of slow growth.

Many advocate the fine wools because they stand so much starving and neglect. Michigan farmers ought to get above this, Choose the animal that gives the best return for good care. Joseph Harris, of Rochester, says: "Give me the pig that will eat and assimilate the most food, the rest I can manage well. Never select a dainty animal; they make a poor show at the swill trough, and also in the pork barrel."

Every fine wool breeder prides himself in saying no breed can compare with his in dollars and cents. Now, I really wish some devoted fine wool man would answer this.

One year ago Mr. Hubbard, of Marshall, sold 400 lambs for 6½ cents per lb., weighing 111 lbs, age, ten months, bringing $7.21 per head or $2,882.00 for the lot; they were from grade fine ewes and Shropshire rams. The past winter he shipped two car loads to Buffalo that brought $7.00 per head.

I wish some fine wool man would answer how this can be done in breeding fine wools to put in market for the price of mutton and wool. When we kept fine sheep we called $600 a good return from 300 head in wool aside from increase, which was uncertain, and with us did not any more than keep up the flock after selling off the culls. Now I can sell every year from 100 ewes, 100 lambs that are as sure for $600 as wheat at $1.00 per bushel, besides my wool clip, which is worth more than the increase when keeping fine wools. This is what I base my figures upon, when the demand for breeding stock ceases (if it should). As it is now I cannot breed enough to supply the demand. It is every man's duty to study the matter for himself. Fine wool raising in Michigan has seen its best day. Michigan cannot raise 20-cent wool against the free ranges of the western plains. This week 200 fine rams were shipped from Howell to the west to use there in breeding stock. Soon that country will fill up and *they* will do the wool raising. A few, comparatively, in this State will do well in breeding stock to send there with which to improve their flocks, but *not all.* Others I am not so sure about. What has been done in Central New York I believe will be done here. George Geddes says: "In Onandaga a few years ago a person could not run amiss of a high-bred, fine flock of sheep; now only one represents the county, the 'Davis Jarvis' flock. Others have gone to raising a mutton grade of sheep, as more profitable."

Michigan farmers, judging by the inquiry for stock, are looking up the matter, and are bound to do so more as the sheep become more plenty, their merits better known and better farming predominates.

WESLEY J. GARLOCK.

OUR FRENCH LETTER.

The Sewage Question in Paris—Effect of Red Poppies on Horses—Phylloxera Remedies.

PARIS, May 8, 1883.

THE SEWAGE QUESTION IN PARIS.

French engineers and hygienists are in a difficulty as to the disposal of the sewage of Paris. It was proposed to utilize it over an area of the forest of Saint Germain of 3,000 acres. A surface ten times greater would hardly be sufficient. The inhabitants in this elegant neighborhood object to be subjected to such an invasion. M. Chevreuil has come to strengthen their protests; he asserts the destruction of organic matters by and in the soil proceeds with extreme slowness.

Experiments are in course of being made respecting the value of wheat, ground by stones and by cylinders, the latter known as the Hungarian process. Some attribute the superiority of the flours of America and Hungary to the manner of their preparation, the bakers prefer these flours to all others as they produce a bread of peculiar whiteness, equal to what an adulteration of alum could never produce. However the fact must not be lost sight of, that the flours of America and Hungary are especially rich in gluten, and this may constitute the secret of their success. M. Chevreul will associate himself with the intended experiment of testing the richness of various wheats, of the same variety and origin, and of the flours they yield in the process of milling by steel cylinders and stones.

EFFECT OF RED POPPIES ON HORSES.

Professor Dessart draws attention to the poisonous qualities of red poppies, that were given as provender, along with clover and sanfoin, to two cows. One of the animals died in horrible convulsions, the other was saved with difficulty by administering coffee and injections. In burying the carcass of the first animal, the new rule was practised; a trench 9 feet deep, and over the remains a layer of sand or of soot; such keeps away worms, presumed to be the pioneers for those germs that cause infection.

PHYLLOXERA REMEDIES.

In July, 1874, the French government offered a prize of 300,000 fr. to whoever discovered an efficacious remedy against the phylloxera. Every year the commission charged with the duty, makes a report on all the perfect cures forwarded during the twelve months. That has just taken place for the 183 receipts sent in in 1882. None of them it appears possesses the merit of novelty, nor of an application happier than any insecticides known. As usual the substances, most recom mended are salt, lime, soot, ashes, etc., salt has ever proved injurious to the vine; lime exercised no effect, soot and ashes are harmless. Mercury and its salts, and arsenic have already been weighed in the balance and found wanting, the interlinear cultivation of hemp, tobacco, quassia has been unsuccessful, so has been the result for strawberries; grafting the vine on plants of a "different" species finds no favor; electricity and dynamite were accepted in advance as capable of killing the bugs, only it might do the same with the vines; on the proposal of processions, united prayer meetings and the exhibition of relics, the commissioners pronounce no opinion. They assert that grafting on American stocks has produced good results, and inundations in autumn are unquestionably sound. Insecticides are not appliable in all cases; in thin and light soils their efficacy is not so apparent as in soils with a surface 12 inches deep. The same remark applies to American stocks—a deep rich soil is what they need. The commissioners conclude the problem has not yet been solved as to finding a remedy, but it is not insolvable; that the only means known to be efficacious lies in submersion, and the use of sulphuret of carbon, and sulpho-carbonate of potassium.

The Story of the Chinch Bug.

A. B. Walton, in the *Iowa Register*, gives the following history of and remedies for the chinch bug:

"The little black bug with its whitish wings is all too well known to need any description. It passes the winter in the perfect state under fence rails, corn stalks, logs, in fact any place where it can find shelter. In the spring when the weather becomes sufficiently warm, just about the present time, it leaves its winter quarters and deposits its eggs just below the surface of the soil, on the roots of the grain, or just above it on the stalks. Riley says the average length of the eggs is three-hundredths of an inch. At first the color is whitish, but changes to an amber hue. The newly-hatched chinch bug or young larva, is pale yellow with an orange spot on the back. It changes to red, finally becoming a dull red with a pale transverse band across the body. We were told by an observing farmer that he had frequently noticed swarms of the little red chinch bugs in the wheat fields before the wheat was an inch high. Now the questions arise, where were the eggs deposited, and how did the old chinch bugs know the field was sown with wheat? It takes the eggs about fifteen or sixteen days to hatch, and it takes longer for the insect to become red from the deposit of the egg, and it surely does not require two weeks for wheat stalks to grow an inch. Following the history of our little bug, we find it becomes brown-black, with two little wing cases extending almost across the pale band that has become darker, while the abdomen or lateral part of the body is dingy gray. Now it is in the pupa state, although it does not, like the butterfly, remain quiet, but keeps on feeding industriously. It requires from five to seven weeks for the chinch bug to obtain his full growth, when it is not a quarter of an inch long, including the wings which extend beyond the body. They have wings but seldom make use of them, preferring to travel in swarms on the ground, when the food supply is exhausted or the grain stalks too hard to allow the insertion of their beaks, through which they absorb the juice of the plant, this constituting their food. They moult four times in coming to maturity, and in our latitude there are two broods a year. It may perhaps be interesting to know that scientific entomologists have discovered ten different varieties of chinch bug.

"In perusing all the chinch bug literature at our command we were very much perplexed at the conflicting statement concerning remedies. There seems to be but one remedy upon which all are agreed, and that is a good rain, soaking the ground thoroughly. Any amount of sprinkling would be of no avail, and artificial irrigation could not be generally possible in Iowa. Collecting and burning corn stalks does not seem practical, for careful observers have stated that when the stalks become dry enough to burn all the vigorous bugs have found other quarters. "Cleanliness, the sovereign remedy for all insects," applies in farming when coping with chinch bugs as well as elsewhere. But perhaps the most practical remedy over which man has any control is rotation of crops. Or, in other words, in the infested districts, refrain for a number becomes diminished. It is almost an undoubted fact that the chinch bug was indigenous to this country. The wild grasses and cereals were its natural food. But when civilization introduced the wheat into this western land the chinch bug, being sensible, quickly changed the old for the new diet. This proved greatly to his liking; consequently it has prospered well and increased rapidly, while the natural agencies tending to its destruction have been reduced nearly to a minimum."

What is the Proper Depth to Plant Seed.

This question, like many others relating to operations on the farm, remains an unsettled one, and therefore presents itself as often as seed time returns, and undoubtedly will continue to do so for an indefinite period of time, because it belongs to that class of questions that do not admit of a direct answer; the surrounding conditions affecting the results. To direct that a beet seed should be planted one inch deep and a kernel of corn two inches, without considering the character of the soil, would be idle, because one-half of an inch in depth in some soils would be equal to an inch in other soils.

As a rule we believe that farmers plant seed too deep, and this practice is often encouraged by directions which are sent out with the seed. Parsnip seeds have been sent out with directions to plant one and a half inches deep; no doubt some will follow these directions and wonder why the seeds do not germinate. In planting seeds there is one fact that should ever be kept in mind, which is, the nearer the seed is to the surface, and kept moist enough to germinate, the stronger as a rule, will be the young plants. To know just the depth the ground will be moist enough to sprout seed, requires more than an ordinary amount of intelligence; in fact, it is at present beyond man's power to know, because it depends on the state of the weather, which however much some may pretend to know about what is to be, no man has yet been able to foretell with any degree of certainty.

On light sandy loam it is safe to plant much deeper than if the land be low and moist, or heavy. When the seeds are expected to germinate in a few days they can be planted much nearer the surface than if they are to be several weeks coming. The smaller the seed the nearer the surface should it be planted, and the more important is it that there should be frequent showers. Large seeds like Indian corn may be planted four or five inches deep, and yet find its way to the surface, but before it does so it will have exhausted a very large portion of its vitality, and will not start at once and make that vigorous growth it would if planted only one and a half inches deep. In planting all seeds the farmer must use his best judgment and plant such depths as he may think necessary to keep the seed moist enough to germinate; never go by any rigid rule, but plant according to the size of the seed, the condition of the soil, and the state of the weather.—*Massachusetts Ploughman.*

Special Prizes for Berkshires at the Chicago Fat Stock Show.

At the meeting of the Executive Committee of the American Berkshire Association, on the 3d of May, 1883, the following resolution was adopted:

Resolved, That the American Berkshire Association offer as a special prize at the American Fat Stock Show to be held in Chicago in November, 1883, a $100.00 pure gold medal for the best pen of ten fat Berkshire barrows, upon the following conditions:

1. All competing animals to be one and under two years old; to be pure bred and eligible to record; to have been bred by and at the time of exhibition to be the property of the exhibitor.

2. The exhibitor to furnish, at the time of entry, a written statement verified by affidavit, giving the pedigree, age, weight, date and manner of feeding, and other important facts connected with the management of each animal during the year.

3. Competition shall be open to all, but no award shall be made except there be two or more competitors.

4. The party securing the prize may hold it in trust until the opening day of the first succeeding Fat Stock Show, when it shall be placed in the hands of the American Berkshire Association to be again competed for. When taken the second time by the same exhibitor, the prize shall then become his actual property.

PHIL. M. SPRINGER, Sec'y.,
SPRINGFIELD, Ill.

Agricultural Items.

THE *Sugar Beet* calls the attention of farmers to the advantages of hill culture for beets; saying the French and Austrians have largely adopted it. This plan of culture seems to present the most practical advantages.

PROF. SANBORN has conducted a series of experiments which prove conclusively that it takes more corn to make a pound of pork when the hogs were allowed to run at large than when they were confined in the pen.

MEMBERS of the Elmira Farmers' Club advise the mulching of wheatfields with straw, saying the cost is small, the benefit sure even in favorable winters, but greater in winters like that just ended, when nearly every day after the first freezing was a strain on the plants exposed.

THE Bureau of Statistics at Washington affords the information that the heaviest seeding of wheat is practiced in Michigan and New York, the average being 1.6 bushel per acre. Further south the quantity decreases. The average for all wheat growing States is now 1⅝ instead of 1½, as several years ago.

HENRY STEWART says that where a dairy man intends to permanently pasture his cows, he can recommend the common quack grass as a splendid early pasture, orchard grass next, then red top and blue grass, with white clover mixed in, and red clover or lucerne to help out deficiencies. He considers these the most productive milk materials for the dairy.

PROF. W. J. BEAL has tested the "Evergreen Grass" of D. Caine, of Battle Creek, by the side of the taller oat grass, *Avena elatier*, and finds them identical. This oat grass has been known and grown in England and on the continent for more than a century. The professor thinks it well worth cultivating in our State, saying it grows rapidly, makes a good stand and seeds freely.

THE Germantown *Telegraph* says that it is pretty generally believed that the rag weed, which is more or less present on every farm, is the cause of bitter milk, whenever it appears. It is one of the worst weed pests upon a farm. It covers, when it gets a start, everything. It is even believed that the pollen from the blossom produces the hay fever, indirectly if not directly. There is no other way to get rid of it except to plow it under.

MANY farmers of Western New York are going out of tobacco raising because of the uncertainties of the crop, the loss of fertility and depreciation of the land, and disappointments in sales. Even those farmers who have realized the highest prices and the quickest sales admit that the effect of tobacco raising is to reduce profits on general farming; that its exhaustive tendency is a serious matter to consider, and that in the long run it is destructive to more important interests.

A CORRESPONDENT of the *Country Gentleman* deprecates the practice of burning weeds, stubble, and vegetable refuse on the farm, saying that the soil is being deprived of the very material absolutely necessary to its permanent fertility—both plant food and the capacity for holding moisture, without which the former is comparatively useless. To this destruction of vegetable matter is due the impoverishment of the soil far more than to exhaustion by the crops, and not until the destructive custom is stopped, can anything like former fertility be restored.

Horticultural.

HEDGE FENCES.

To the Editor of the Michigan Farmer.

Having noticed inquiries in your paper about hedges and screens, and having had some experience with them in all contingencies, connected with the planting and after care, I will give your readers my experience. All the matter of instruction as to how to plant hedges may be told in a few words, and will apply as well to one variety of plants as to another. The first condition requisite to success is to have good soil, free from standing water; second, make a trench where the hedge is to stand, 18 inches deep and two feet wide, fill it with good earth from the garden, if what is thrown out is not very good, setting the plants in the center of the trench, spreading out the roots that they may lay in the earth in the same shape they were where they grew originally, placing them a trifle deeper than they were before, firming the earth around roots and on surface after the work is completed; third, select the plants of uniform size for each row: plant them from 18 to 24 inches apart in the row, to a line, distance apart to be according to size of plants. Desirable plants are from 12 to 18 inches high; but if immediate effect is wanted, two to three feet trees may be used. After care is of great importance if anticipations are to be realized of having a firm, straight, symmetrical, thick hedge. The same rule will apply in planting out hedges that we must be governed by in planting out trees on the lawn or any where else. They must becultivated until they get a start in their new quarters, and become habituated to their surroundings. The grass and weeds should be kept away in a circle of three feet in diameter at least for the first three seasons. The better the after care the greater degree of success will be attained. The shears should be used as often as the sides and tops grow out beyond their limits. The proportion should fix these limits and say thus far you may grow out and no farther; and use proper means at the proper time to hold it within these bounds. The time to prune can be varied according to circumstances. May pruning will retain the growth near the bottom and give more growth the ensuing season than would be obtained if left until July or August, as it would increase buds for next season fifty per cent more than if trimmed in August or September.

The planting of trees for wind breaks, screens to buildings, or protection to gardens or orchards, varies only from that of hedges in that the trees are planted farther apart and of larger size. The kinds used most satisfactorily are the arborvitæs and spruces. To give different shades the different varieties may be used, as no trees are of the same shade. A uniform color is most desired unless laid off in panels, when other shades can be used to designate the work designed.

GEO. W. PARK.

LANSING, May 15, '83.

FLORICULTURAL.

In reference to the culture of pansies, a correspondent of the *Country Gentleman* says: "Pansy seeds should be sown in sandy soil, mixed with an equal portion of very rich compost, and when the plants have five or six leaves, transplant them into the beds or borders where they are to bloom, placing the plants four or five inches apart. Very large flowers can only be obtained by the most liberal use of fertilizers. The pansy is a gross feeder, and will not grow to perfection if its needs are not consulted. The beds should be prepared as richly as for asparagus or celery, and when they begin to flower give them a plentiful showering every night, when rain has not fallen. Hot, dry weather will prevent their making a fine display, if the beds are not well moistened and shaded from the noonday sun. In the hottest weather, water the beds both morning and evening. When the young plants have begun to flower, a weekly watering with liquid stimulants will be found very beneficial, and if yard manure is not at hand, soluble Pacific guano will make an excellent substitute. Dissolve two tablespoonfuls of the guano in a gallon of warm water, and pour it freely about the roots, but not upon the leaves. I find it the best stimulant for all my flower beds. Pansies can be quickly raised from cuttings of the fresh young shoots which spring from their roots, by planting them in sandy soil in the shade. They will make fine plants for autumn flowering, as young plants always bloom the finest. If all straggling branches and seed pods are removed from the plants raised for early spring flowering, they will also bloom luxuriantly in the autumn. With a pair of shears, cut off the first growth by the last of June, and do not let any pods mature excepting those especially desired for seed. It ruins pansies to let them seed plentifully in September and October. Those who gather these flowers with lavish hands for themselves and their friends, always succeed best in their culture. The standard shape of the flower should be nearly or quite a circle, and the size should equal a silver dollar."

THE *American Garden* says that lilies of the valley can now be seen in bloom in florists' windows the year round. Large quantities of roots are imported from Germany, and in November they are placed closely together in shallow boxes, which are kept in cold frames, where they can be protected against severe freezing. After about four weeks those wanted for earliest blooming are removed to a forcing house with a temperature of about fifty degrees, which is gradually increased to eighty degrees. For window and parlor culture lilies of the valley may be forced as easily as any plants. The "pips" should be planted in pots at any time during November, six or eight to a five or six inch pot. Ordinary potting soil should be used, and pressed firmly around the crowns, which should stand slightly above the surface. The pots have to be kept out-doors for a month or more, plunged in sand, and sufficiently protected to prevent their breaking by frost, although the plants themselves are rather benefited by being exposed to freezing weather, provided their crowns are covered with moss. About a month before they are expected to bloom they should be brought to a warm room, and gradually watered more copiously, as they grow.

PARK'S *Floral Magazine* gives the following directions for propagating the rose: "Take a young branch, cut a slit just below a leaf-bud, put the branch through the hole in a common flower pot until the slit in the bark is inside the pot, then fill the pot with sandy soil, set it on the ground, bending the branch and pinning it down without breaking; keep the pot well watered and the branch will root in a few weeks, then cut outside the pot, without disturbing the roots. The large white rose and many others that do not root easily from a slip, can be propagated in this way, as can, also, most shrubs and woody plants. Of course it will be understood that the branch should be pushed upward until several inches are above the rim of the pot, and the earth pressed tightly around it, the same as though potting any ordinary plant. The point to be observed is to leave the branch unsevered, so that it may draw strength from the parent root, until its own roots are started. Leave it undisturbed in the pot in the cellar until the next spring, then set where it is to remain."

Fruit for the Farmer.

The Philadelphia *Press*, in noting the fact that the farmer who grows grass, grain and live-stock seldom pays much attention to fruit, says:

"Fruit and grain crops are apt to interfere with each other, and the taste that makes a man an expert in one, does not generally apply to the other. But this fact need not and should not prevent their culture for family use on a small scale. The small fruits simply require good land, the richer the better, and then clean culture. The practice of planting strawberries in beds, in pinched-up gardens, has done much to discourage their culture, because then all the work must be done by hand. Blackberries and raspberries are planted, if planted at all, next to the fence, where they grow in a tangled ticket, and soon become unbearable nuisances. All small fruits should be planted in an open field somewhere, not far from the house, in long rows, so that horse culture can be given on each side. The number of rows needed will depend, of course, on their length and the size of the family, but if well cared for, it will not require many. For instance: five hundred hills of strawberries, set 18 inches apart, and 500 more each of raspberries and blackberries, three feet apart, would go a long way toward supplying a family two or three times a day during the season; but if not enough, experience would show it, when the number could be increased or better care given. This number would occupy less than five rows across a fifty rod field, and would be almost an insignificant "patch" on a hundred acre farm, as regards space or the time necessary to give to it; and yet, unless the fruit could be bought very low at the door, it would yield an amount in delight and health not possible to produce in any other way. Strawberries, particularly, are not surpassed in popularity and health giving properties by any fruit in the world, unless it be peaches, and peaches are more difficult to grow. The horse work can be done in a few minutes by a man, while women and children can pull the runners from strawberry hills and the weeds that the cultivator does not touch, as well as the trifle of clipping that raspberries and blackberries require when the young canes are growing. The cutting out of the old wood, and the shortening in the laterals, any man of sense, or even a stout boy or woman, can do in a little time as spring advances, so there is no just reason why a family should be deprived of such luxuries."

The Tent Caterpillar.

As soon as the buds expand enough to show the green leaves, this pest of the orchard makes his appearance; if permitted to have his own way for ten or fifteen days he will not only very much injure the trees and the fruit, but will also have become large enough to make it very difficult to destroy him, without spending more time than the farmer usually has to spare at this season of the year. The destruction of the caterpillar, when attended to at the proper season, is a work so easily accomplished that there is really no good excuse for having trees injured by this unsightly pest. So easily can this work of destruction be thoroughly done, that in localities where farmers and orchardists do their duty, the tent caterpillar is nearly exterminated, and no doubt but would be quite so if it were not for the black cherry tree that grows in the woods and by the side of the fences. As the caterpillar is quite as fond of the leaves of this tree as he is of those of the apple tree, until efforts are made to exterminate them on the cherry trees, they will always be enough escape to render it necessary to go over the orchard every spring to destroy such as find their way to the orchards to lay their eggs.

To make the work of destruction easy and effectual, a conical brush should be provided and tied upon the end of a very light pole, which should be long enough to reach the top of the trees; a shallow dish should also be provided, into which should be put a small quantity of kerosene oil; thus provided, as soon as the caterpillars have formed a nest as large as a hen's egg, the orchardist should enter the orchard in the morning as soon as the sun makes its appearance. By looking towards the sun at this time of day the nests can be readily seen, and destroyed by dipping the brush into the kerosene oil and then passing it several times through the nests. This work can be done very rapidly, and it so thoroughly kills the worms that it is very rarely necessary to go over the orchard the second time, except to kill those that are very late in hatching out. The work of destruction should never be continued after the sun gets high enough for the worms to get out of their nests to feed on the leaves. The work may be resumed in the middle of the day after they have returned to their nest; but the noon sun is not in a position to aid the discovery of the nests as well as early in the morning, therefore the morning is the best time.—*Massachusetts Ploughman.*

Fruit Raising.

A correspondent of the *American Cultivator* says: "As the country grows older the difficulties that beset the raisers of good fruit increase. Good soil is needed to commence with, and the more elevated and airy the better and surer to escape the frosts, blights, insects and all the various diseases to which fruits are liable. Hills having a northwestern or northeastern cant usually, other things being equal, produce fairer fruits than those having a southeastern or southwestern cant. This circumstance is supposed to be accounted for by the manner and length of time the sun and winds strike the trees during the blooming and bearing season, in their various locations. Insects of all kinds seek the sunny spots for their work; and the more sheltered from the keen winds the tree is the better can these pests operate upon the blossoms. The blossoming period is the seed time for the insects; and well do they improve it in favorable locations, and with favorable winds and weather.

"A new insect enemy made its appearance at harvest, which, though insignificant in appearance, was more formidable in its results than any other species. It was a small maggot, which was sown in the blossom, and which confined its operations within the skin of the apple, without boring out, until it fairly destroyed the pulp for all edible purposes. Early summer and fall apples were in some localities almost entirely destroyed by these pests. Late fall and winter apples were not so badly affected, although the maggots seem to ripen with the fruit. Many of the best Greenings and Baldwins in appearance were, upon using, found all honeycombed and scalloped by the maggots. A neighbor, Mr. A. H. Davis, who pays considerable attention to fruit, says the maggot is identical with one which appeared in Massachusetts forty years ago. He thinks it will stay until we have a barren year for fruit, and then disappear."

How to Destroy Burdocks.

Docks are not numerous in the rich grounds adjacent to the house and barn, and in the fence corners. As each one, when permitted to go to seed, produces about 10,000 seeds, they are bound to spread and occupy all the ground. The burdock is annoying and disagreeable, owing to the fact that the burrs adhere to everything they come in contact with. The colts get their manes and tails filled with them, they cling to the faces and tails of the calves and cows, and the dog is tormented by their adhering to his soft hair. In fact, they are a perfect nuisance.

The best way to get rid of the docks is to spade them out, and lay the roots up to dry. If that is considered to be too laborious a job, take a sharp hoe and cut them off just below the surface of the ground, and in a few weeks go over them again, cutting all off that have sent out new leaves. Going over them a few times in this way will finish them all.

In half a day's time a man with a sharp hoe will generally cut all such weeds that are growing on an ordinary farm, and it is culpable negligence if they are not destroyed. I find no difficulty in keeping the weeds cut, and all the odd chores about the buildings done in parts of rainy days, when there is not time after the rain is over to go to the fields before dinner or supper.

The same treatment may be applied to wild carrots and wild parsnips, for as far as my observation extends they only become noxious weeds when they are permitted to ripen their seeds in fence corners, and in the vicinity of the garden or farm buildings.

When weeds and briers are allowed to fill up the fence corners and thrive along the roadside, the farm presents a very unthrifty and unsightly appearance. A few of the half days that are spent at the village tavern, grocery or store, talking politics, if not in some worse way, will eradicate them all, thus adding much to the convenience and looks as well as to the value of the premises.—*Examiner.*

Cauliflowers.

The *American Cultivator* says, in reference to this vegetable, which some enthusiast has dubbed "etherealized cabbage:"

"Cauliflowers require very high cultivation, even more so than cabbages, and plenty of moisture. Whether grown in the kitchen-garden, or upon a large scale, the crop is a paying one. The demand is evidently rapidly increasing, and there is no more delicious vegetable grown. Cold frame plants are probably the best and hardiest for early crops; the frames, however, need rather more protection during cold nights than is required for cabbage plants. Seed sown in hot-beds in February will produce plants that are not much, if any, inferior to cold-frame plants. They should be transplanted once, before setting in the open ground, and also should be gradually hardened by exposure; in this way they may be in condition to set out as early in April as the ground will permit. Set the early sorts about two feet by fifteen inches, and cultivate the same as cabbages. Where irrigation is practicable, great advantage is thus obtained during a drought. For late cauliflowers, sow seed in open ground, from the middle of May to the middle of June, in hills, the same as directed for late cabbages. Thin to one plant in each hill; this avoids the drawbacks resulting from transplanting in a dry time. When the plants first appear they are liable to the attacks of a small black fly; guard against this by frequent dusting with plaster, which apply in the morning while the dew is on. When the heads are forming, tie the leaves together at the top, thus avoiding discoloration by exposure to the sun."

A Good Investment.

My wife said I was a fool when I brought home a bottle of Parker's Ginger Tonic. But when it broke up my cough and cured her neuralgia and baby's dysentery she thought it a good investment.—N. Y. Taylor.

Some Market Pears.

The Bartlett has the greatest number of good qualities combined, including free and handsome growth, early bearing, fair fruit, sound cores, great productiveness, and special adaptedness to canning; and it is not surprising that it has stood at the head of the list for wide popularity for the past twenty years. Next to this, perhaps, is the later Beurre d'Anjon, which also has an unusual combination of good qualities. Its uniform and moderate bearing contribute to the full development of the fruit, and it is not common to find a small and poo specimen. The handsome form and good size are combined with an excellent flavor; and it possesses in an unusual degree the quality of keeping a long time after becoming ripe. The earliest specimens ripen in October, but there is no difficulty in keeping the later ones till January if in a quite cool room. Some orchardists would place the Seckel next, and where soil and treatment have been right, it has proved very profitable. Its freedom from blight and its reliability as a constant bearer, are qualities of great importance.

There are some other sorts which may become more popular as market pears in future, when better known to purchasers. Clapp's Favorite is the handsomest large early pear. Doyenne Boussock has some excellent qualities. The tree is a fine, healthy grower, both as a standard and dwarf, and the fruit is always remarkably fair. In quality it is about equal to the Bartlett. But from some cause it has never found its way largely into market, and brings but a moderate price. The Howell is a vigorous grower and prodigious bearer, and the fruit is unusually fair. Most judges place it as quite equal to the Bartlett in flavor, but it does not sell so well. It will probably be better esteemed in future years. The Buffum is perhaps the finest of all growers and the greatest of all bearers, but the fruit is too small and not good enough. It may, however, sell well in some markets, and if at only half price, an acre of orchard would bring good returns. Some orchardists place the Clairgeau as the most profitable late pear. A dish of selected specimens makes the finest show of all the sorts on the table. A loaded tree in autumn, with its large, ruddy, brilliant pears, is the most showy sight among pear trees. The quality is sometimes pretty good, but O. B. Hadwen of Worcester says he doubts whether any connoisseur in pears can be found who ever ate a whole Clairgeau, and that it is preferred by restaurant and hotel keepers to Anjou because it lasts longer on the table.

Among dwarfs, Duchesse d'Angouleme stand high above all others for profit, the hardiness and fine growth of the tree, and the large and showy fruit, being its special recommendations. Its remarkable freedom from blight admits copious manuring, so essential to the best growth of nearly all fruits.—*Country Gentleman.*

Feed the Grape Vine.

The oldest grape growers we know always manured their vines plenteously, and never dreamed of giving them too much. Of late years there has arisen a class of grape growers who contend that but little manure is needed; that in fact the poorer the land the better. We are not among this class. We have found that the richer the soil the better. We have even known dead animals to be buried about the roots; though we think that this is carrying the manure question a little too far. Vines will sometimes fail in rich land, we are aware, but it is from other causes than the soil being too rich; there are other plagues in the way. It may be mildew, it may be the little dusty-looking worm which sometimes strips the vines of its foliage; or it may be the phylloxera which attacks the roots and plays havoc with them; others think there is something in the climate, and so on. We do not pretend to decide the question; we only know that if we do the best we can in the cultivation of the vines, success will reward us in a majority of cases; but when failure is the result we feel very sure that it is not high feeding. The grape vine, we are confident, and all our experience goes to show it, is a good liver, and we run less risk in over-feeding than in starving it.—*Germantown Telegraph.*

J. J. THOMAS advises, as a light, graceful, but effectual screen, a barrier of shrubs interwoven with barbed wire. He says: "There are a few dense shrubs which have a natural hedge growth and require but little cutting back, such as the purple barberry, the sweet briar, the privet, or the buckthorn. Hedges made of these, strengthened with three or four galvanized barb-wires stretched at different heights through their interior, would not permit any animal to pass. They would appear light and graceful at a distance, but be found impregnable on a near approach. The barb wires are to be stretched successively one above the other as the screen is growing, and when well encased within and held by the branches, they will be firm and secure.

Horticultural Notes.

WOOD-ASHES, leached or unleached, will revert superphosphates, and the two should not be mixed if an application of soluble phosphate is desired.

THE exports of apples from the United States and Canada for 1882-3 were 365,107 barrels. A larger quantity could have been absorbed by the foreign demand but for the scarcity in the home markets.

THE Victoria currant is more prolific than the old Red Dutch, and is therefore more profitable for market gardeners. But as the Victoria has more acidity the Red Dutch is the better variety for farmers who intend to grow only for home use.

A CORRESPONDENT of the *N. Y. Tribune* says that owing to the increased attention paid to sorghum culture at the moment, unprincipled parties are selling the common Early Amber under various seductive titles, as "Cape May Hybrid." The Early Amber seems good enough without a fancy name.

HARRIS'S "Gardening for Young and Old" advises that beans should be planted thick—about an inch apart in the row. This makes them ripen sooner. The first dish of beans always came from the children's garden, because they planted thicker, There is a limit, however, and if too thick, the crop will fail. Try different distances.

THE rule advised for pruning the pear, apple plum and cherry trees is never to shorten in or prune a leading shoot. It is held that shortening-in, as it is termed, causes the growth of shoots from buds which otherwise would have formed flowers and fruit, and is opposed to the formation of fruit spurs on the branches from which fruit is produced on the trees mentioned.

A HORTICULTURIST writing to the Ohio *Farmer*, says: "Nothing is more distressing to a level-headed horticulturist than to see tomato plants a foot or eighteen inches high and bare of branches to the top, swaying and whipping in the cold wind after transplanting. Where such drawn-out plants must be used, a small inclined trench should be dug and nearly the whole stem placed beneath the soil. No evil will result but much good from such planting, and a vigorous, stocky growth will follow."

THE *American Cultivator* says: "Did you ever try planting peas in hills? Make a large hill, rich with well-rotted compost or fertilizer; then take a nail keg or something about that size, and press it into the ground so as to make a good deep circle upon the hill; sow your peas in that circle, and plant a large pea brush in the center. You can grow as many peas to the acre in this way as in the drills. They are convenient for the pickers, and they have a neat and tasty look in the garden, which is not a small item, especially when you are trying a new method."

THE Utica *Observer* notes some large apple trees in orchards in the vicinity of Clinton, N. Y. In the spring of 1787 several families from Connecticut settled there, bringing with them a half-hogshead of seedling apple trees, of one year's growth, snugly packed. They were set in a nursery, and, when of suitable size, were again transplanted in various orchards about the neighborhood. Some of these trees are still standing, of enormous dimensions. In Mr. Bronson's orchard one tree is eight feet in circumference. Mr. Harding has one tree nine feet four inches in circumference; Mr. C. Palmer's one tree, nine feet four inches in circumference; Mr. Brenton's one tree, nine feet one inch in circumference. The largest tree in Clinton and the best preserved, stands on College Street, near Mrs. Bristol's. It is 10½ feet in circumference. Another of the same size stands on the grounds of L. D. Luke. The first Rhode Island Greening tree, and the mother from which nearly all the rest have sprung, still stands with low branches, brooding on the ground of J. Benton. It is still in quite a healthy state, and measures nine feet in circumference.

Apiarian.

Chilled and Foul Brood.

A correspondent of the *Country Gentleman* says, respecting this plague of the apiary:

"During the early part of the season brood is liable to get chilled and the dead larvæ become a putrid mass in the brood nest or on the sides of it. In some such instances the dead brood will not occasion much injury, and will be cleaned out by the colony. In some cases the bees will fail to rid the hive of the dead brood, and if the comb is kept moist putrefaction ensues, which will, if the conditions chance to be favorable, generate a virulent stage of putrefaction, which acts as a deadly virus when inoculated into a healthy brood. This virus is known as 'foul brood,' more properly, 'brood plague.'

"Foul brood is, wherever it has made its appearance, as much a dreaded plague as the cattle and swine plagues, charbon and fowl cholera, all which are contagious or infectious sporadic diseases. Heretofore nothing certain or definite as to the cause or causes which develop foul brood have been known. Ever since bees were domesticated in all countries, foul brood relies solely for its introduction and diffusion to the presence of a contagion, generated spontaneously as aforesaid, or carried by bees—those which have come in contact with foul brood, or anything which is contaminated with the virus. Once introduced it spreads from its point of introduction as from a centre—each newly-infected colony becomes a focus, whence the plague may radiate in every direction. The nature of the contagious matter has also so far baffled all the efforts of investigators. Neither microscopic examinations nor chemical analyses of the virus have led to the discovery of the principle of contagion. The virus seems to be fungous in character, and its vitality is very tenacious; its germ (spore) may exist in a dormant condition like the dried seeds of plants, and is capable of resisting not only great extremes of temperature, but the action of moisture, dryness, and all the varying conditions to which it may be subjected when upon the surface of or within the soil. It will be preserved for years in all its virulence unless neutralized by contact with some potent antiseptic.

"The phenomena of foul brood and the general character and progress of the malady are recognized by a morbid action of the sealed and unsealed larvæ resulting from the multiplication or reproduction of spores that feed upon the larvæ, spreading devastation, like gangrene, all through the brood-nest of the colony attacked. In some instances it is very difficult to identify the virulent putrefying bee-brood from ordinary putrefaction. A test can be made by putting a piece of healthy brood into a cage made of wire, inoculating the piece of brood with the suspected mass, placing the cage with its contents within the brood-nest of a colony and watching it. If within a few days the morbid changes spread over the piece of brood in the cage it is proof that foul brood is present, but if the larvæ hatch out in the cage and no spreading of morbid changes appear, the suspicious combs may be regarded as simple rottenness. I can add nothing to the method of treating it promulgated by C. F. Muth of Cincinnati, who recommends treating it with salicylic acid and borax.

"As to the remedial agents, it has not been ascertained whether salicylic or benzoic acid is the most potent disinfectant. Dr. Salmon, after his investigation of swine plagues and fowl cholera, gave in his report to the Department of Agriculture a detailed account of an experiment which demonstrated that a two per cent. solution of salicylic acid containing sufficient borax to cause solution—about one and a half times as much as the acid—completely destroyed the activity of the virus within three hours. He also experimented with benzoic acid with borax, and found that both acids are about equal, or possess the same activity in destroying bacteria. How much of the destructive power comes from the acid and how much from the borax he did not determine. Borax alone is sufficient in many cases to prevent the growth of bacteria and destroy the spores. Hyposulphate of soda, iodine, thymol or thymic acid, if genuine, and carbolic acid are potent antiseptics, and as prophylactics in some cases of foul brood might be used to eradicate the contagion. Carbolic acid (Mallinckroodt's best crystalized two per cent. solution) will perhaps give the most satisfactory results. Foul brood virus destroys only the larvæ. It does not affect the mature bee, and any agents used to arrest the disease must be harmless to bees. In the treatment of foul brood the brood-comb may be dipped in the solution and the hive throughout washed with it.

"Beekeepers may avoid having putrid brood by due attention to the condition of the colony. Brood is subject to death from the effects of cold, especially small colonies in a comparatively large space of hive. If the dead brood remains moist, putrefaction immediately ensues and causes trouble. Hence beekeepers should limit the brood chamber to compare with the size of the colony."

From the Orient.

The *Bee Journal* for May 9th contains a letter from Frank Benton, in which he gives the following account of his work in the Orient. After mention of his serious illness and the hindrance to his work caused by the Moslem outbreak at Beyrout, he says:

"Notwithstanding these interruptions, I was able to send out, during the season of 1882, queens to the number of 340, and three full colonies (a small amount of honey and wax were also sold). Of these, 179 were addressed, by express, directly to Mr. D. A. Jones, of Canada, while a number of the rest were sent by mail to parties in England, who, it was expected, would forward a portion of them to Mr. Jones. From the latter I never received any definite statement as to how many of these queens were safely received, but only the assertion that many of them failed to get through. The cause of poor success in shipping those sent by express, was greatly owing, I believe, to the method of shipping prescribed by the gentleman just mentioned. The only shipments to America made during the past three years, that have been eminently successful, were two lots (one of 30 queens in 1881, and one of 42 queens in 1882), put up in accordance with the plan I proposed upon first landing in Cyprus in 1880. I have met with fair success, sending queens from Cyprus and Syria by mail to different parts of Europe, except when, this last year, some 40 fine Syrian and Palestine queens were seized in London and sent to Paris (having been mailed at a French post-office in Syria), after which I got them back at the end of about six weeks, all dead!

"I sent the first queens by mail from Cyprus to Europe in June, 1880, as can be seen by reference to the *British Bee Journal* for July, 1880, where the method employed is described and the cage illustrated. With this form of cage as a basis, changing from time to time conditions of putting up to suit the season of the year, and as further experience suggested, I think I have, with the help of one modification suggested by a friend in England succeeded in finding out how to be successful in sending queens from the East to distant lands. It must be borne in mind that it is a journey of 3,000 miles, 1,500 of it by sea, in a sub-tropical climate, where hot desert winds are particularly trying for the bees, which are buried in the ship's hold, under tons of other mail matter.

"During the coming season I shall try to send some queens by mail from Europe to America. I believe I would have succeeded in doing this last year, had not the 40 queens been seized in England; for some of these packets were experimental ones addressed to Mr. D. A. Jones. Some of the English postal regulations are very troublesome, and, among these is that which excludes queen-bees from the mails. The bee-keepers of England ought to protest *en masse*, and keep protesting until permission is granted to send queens by mail. This is surely one reason that has tended to make the introduction of Italian and other improved bees very slow in England. Our British cousins, so progressive in many other respects, have not even a packet post, without which we would hardly think we could get along."

THE very best investment the beekeeper can make in spring, after pollen is being gathered and before new honey comes freely, is to feed two tablespoonsful of thin syrup made from good brown sugar. This will excite rapid breeding and bring forward the brood early. The bees hatched just before the principal honey harvest, are the ones that make the profits. Colonies produce much brood when the honey flow begins, but these bees hatch too late to gather much honey, unless it be upon some other plant. This explains why those colonies strong in numbers early, give such great results, and small stocks in spring scarcely give any results during the entire season. If this stated feeding is begun, it must be continued until the bees refuse to take it longer.

A Specific for Change of Life.

We are in receipt of a letter from J. T. Hamby, Esq., of Floral, Ark., in which the writer says: "*Samaritan Nervine* cures female decline, and during the change of life it is a specific." Suggestive facts, truly. $1.50.

The Michigan Farmer
—AND—
State Journal of Agriculture.

DETROIT, TUESDAY, MAY 22, 1883.

WHEAT.

The receipts of wheat in this market the past week have been 79,959 bu., while the shipments were 136,929 bu. The visible supply of this grain on May 12 was 21,021,813 bu. against 10,208,831 bu. at the corresponding date in 1882. This shows an increase over the amount in sight the previous week of 314,564 bu. The exports for Europe for the week were 707,186 bu., against 594,897 bu the previous week, and for the past eight weeks 7,541,410 bu against 4,117,776 for the corresponding eight weeks in 1882. The stocks in this city on Saturday amounted to 1,005,730 bu, against 1,083,034 last week, and 97,612 bu. at the corresponding date in 1882.

The market has been a weak one for the past five days, and values have been slowly but surely tending downward. A few days of sunshine, reports of immense crops in California and Oregon (we note that these big crops always grow in far off States), have been sufficient to scare the "bull" interest, and the result has been a dull and dragging market. Many dealers, however, both in this and the Chicago market, are preparing for a reaction, and the recurrence of cold weather and lowering skies will help it forward. Vegetation is very backward, and it looks as if the season would be fully two weeks later than last.

Yesterday the market opened stronger, with prices higher than at the close on Saturday, weakened during the day, but finally closed at an advance over Saturday's closing figures.

The following table exhibits the daily closing prices of wheat from May 1st to May 21st:

	No. 1 white.	No. 2 white.	No. 3 white.	No. 2 red.	No. 3 red.
May 1......	1 07½	95	85½	1 14	....
" 2......	1 07½	96	85½	1 15½	....
" 3......	1 07¾	98⅜	86	1 16	....
" 4......	1 08½	1 00	87	1 16½	....
" 5......	1 09	1 02	89	1 16½	....
" 7......	1 08½	1 01¼	89	1 15½	1 11
" 8......	1 08¾	1 00	87	1 15¾	....
" 9......	1 08¾	99	87	....	1 10
" 10......	1 08½	98¼	87	1 15½	1 10½
" 11......	1 08	....	87½	....	....
" 12......	1 08¾	98	87½	1 16½	....
" 14......	1 08¾	1 00	88⅝	1 16½	1 12
" 15......	1 08¾	99¾	88½	....	1 12
" 16......	....	1 00	88	1 14½	....
" 17......	1 07	99¾	88	1 14½	1 10
" 18......	....	1 00	..	1 13¾	....
" 19......	1 05½	99	..	1 13	....
" 21......	1 06⅝	1 00	86¼	1 13	1 10

Rejected closed at 77¾c per bu, one week ago 76⅝c.

Futures have ruled weak, and the decline in them has been more pronounced than in cash wheat. The following table will show the fluctuations from day to day in the various deals during the past week:

	June.	July.	Aug.	Sept.
Tuesday..........	1 09⅝	1 11¼	1 12⅝	1 14¼
Wednesday........	1 08¼	1 10½	1 12½	1 13
Thursday..........	1 07⅝	1 09¾	1 11	1 12⅜
Friday............	1 06⅝	1 08½	1 09⅝	1 10¼
Saturday..........	1 05⅞	1 07⅜	1 08⅜	1 09⅝
Monday............	1 06⅞	1 08¾	1 09½	1 10¼

The condition of fall wheat in the Canadian Provinces, as shown by the May report of the Bureau of Industries, is very unfavorable. From a summary of that report we take the following extracts:

Fully eighty per cent. of the total area of fall wheat in Ontario lies west of the meridian of Toronto, and unfortunately the most discouraging accounts of the crop are received from that part of the Province. There is indeed a singular contrast in the reports for the eastern and western sections; for, while those for the one agree in saying that the prospect has not often been worse, those for the other are not less unanimous in saying that it was never better.

"The great rain storm that was central over the Ohio valley in the latter part of January extended into Ontario (either as rain or sleet), northward as far as Georgian Bay and eastward as far as Toronto. In the Lake Erie counties, and in portions of Middlesex, Oxford and Brant, nearly the whole of the snow was carried off at that time; and a cold spell following, the fields were left coated over with sleet and ice. In those counties the general verdict of correspondents is, that the wheat was 'frozen to death;' whereas in the northern counties the verdict is, 'smothered to death.' A correspondent in Huron county observes that six successive crusts formed on the snow during the winter, two of which were strong enough to bear up a horse.

"But the appearance of the crop this spring is no doubt due in some degree to the condition of the ground at seed-time. In the east it was favorable, and the young plant made a good start in the fall. In the west the heavy rains of July and August and the season of drouth that followed interfered with the proper cultivation of fallows, and especially of pea and stubble lands, so that the soil was in very poor tilth. The seed was sown late, and it neither rooted well nor tillered well. This circumstance will account in a measure for the bad reports now received; and it is reasonable to hope that, where the plant has survived the snow and ice and exposure of winter, the outlook will brighten with warm and growing weather. It is unfortunately true, however, that a large extent of wheatland is already doomed, and has been plowed up or re-sown with spring grains.

"The only cheerful reports from the western part of the Province refer to the northern half of Essex, the lake shore townships of Huron and Bruce, the county of Wellington, the northern parts of York and Peel, and the southern half of Simcoe; and even in these districts the crop has been seriously damaged by the frosts and winds of April. Elsewhere the area sown will probably be reduced by twenty per cent., a portion of which will be put under spring wheat and the rest under barley, oats and peas. The eastern section of the Province is confidently expected to produce a full crop."

The following table shows the prices ruling at Liverpool on Saturday last, as compared with those of one week previous:

	May 12. per cental.	May 19. per cental.
Flour, extra State.......	12s. 0 d.	12s. 0 d.
Wheat, No. 1 white.....	8s. 11 d.	8s. 10 d.
do White Michigan..	8s. 11 d.	9s. 0 d.
do Spring No. 2....	9s. 4 d.	9s. 4 d.
do Western, new...	9s. 1 d.	9s. 0 d.

Mr. Frank Crego, Strickland, Isabella Co., writes us as follows:

"I am more than pleased with the result of my card in the Farmer. Have received as high as eight inquiries per week from the same. I take five weekly papers, and consider the Farmer equal to all the rest."

Wheat in St. Clair County, especially that on clay land, is badly winter killed. That in Huron and Sanilac counties looks better than in sections further west and south, according to the Sanilac Reporter.

CORN AND OATS.

The receipts of corn in this market the past week amounted to 9,517 bu., and the shipments were 16,739 bu. The visible supply in the country on May 14 amounted to 15,647,398 bu. against 8,551,281 bu at the same date last year. The export clearances for Europe the past eight weeks were 10,884,410 bu, against 2,418,667 bu. for the corresponding eight weeks in 1882. The visible supply shows a decrease during the week of 521,000 bu. The stocks now held in this city amount to 16,609 bu., against 23,616 bu last week, and 19,592 at the corresponding date in 1882. Values appear to have declined slightly the past week at most points. In this city No. 2 is now quoted at 58½c per bu., against 59c one week ago, and high mixed at 59c per bu. against 60c the previous week. New mixed is selling at 56c per bu., the same rates as quoted last week. Corn is inherently strong at present, the dullness perceptible being only of a temporary nature. The season is very backward, and the length of the feeding season favors high prices. In this State stock men had to feed for fully seven months, and other States were of course subjected to the same conditions as our own. The difference of a month or six weeks' feeding is a large item, and has probably depleted stocks much more than is generally supposed. Then the foreign demand has taken fully four times as much to meet it since January 1st as it did the previous year. When to these causes is added the present unfavorable season, it will be seen that holders can afford to hold strong views, and that values are much more likely to advance than recede until the new crop becomes available. There is considerable talk in the corn States about worthless seed, and it will be very unusual if considerable losses are not sustained by farmers from this cause. In Chicago the market during the past week has fluctuated somewhat, but at the close was unsettled and a shade lower than a week ago. Cash No. 2 is quoted there at 55⅛@55¼ per bu., and rejected up to 55c. In futures May is quoted at 55½c; June at 56c; July at 57⅞c; and August at 58⅞c. The Chicago *Tribune* says that Iowa and Illinois report very poor corn prospects. The corn is rotting in the ground over large areas, and a great deal of replanting is reported as necessary.

The receipts of oats in this market the past week were 28,562 bu, and the shipments were 3,674 bu. The visible supply of this grain on May 12 was 4,202,196 bu., against 1,873,673 bu. at the corresponding date in 1882. Stocks in this city on Saturday amounted to 26,300 bu., against 34,290 bu. the previous week, and 7,183 bu. at the same date last year. The visible supply shows a decrease during the week of 264,947 bu. Our local market has kept firm under a rather slack demand, and spot oats are if anything a shade higher than a week ago. No. 2 white are quoted at 47½c per bu., and No. 2 mixed at 44½c. The Chicago market is lower, especially in futures, and a weaker feeling prevailed at the close of the week. No. 2 mixed mixed are quoted there at 41@41⅛c per bu., and in futures May delivery is selling at 41½@41⅝c, June at 42c, July at 41⅞c, and August at 34⅞c. There will be a large breadth of oats sown this season, but so there was last and they all seem to have been needed. In New York the market is reported weak but a shade higher than a week ago, at the following range of quotations: No. 3 white, 51½c; No. 2 white, 52½@53c; No. 1 white, 58c; Western white, 52@58½c; State white, 56@58c; No. 2 mixed 48½c; No. 1 mixed, 48⅞c; Western mixed, 46@52c; No. 2 Chicago, 51c per bu.

HOPS AND BARLEY.

Hops have dropped fully 10c ℔ lb. in the New York market the past week, and but little business is doing at the decline. In the New York hop district reports from the growing crop are generally favorable, with here and there an exception, and a good average yield is foreshadowed by present conditions. But little stock is moving anywhere, and the decline in values appear to be quite general. At Cooperstown, Waterville, Cobleskill and Oneida, the market is quoted very quiet, with buyers declining to operate except at quotations, while holders are said to be looking for better prices in a short time. Stocks are very light, but so, apparently, are demands, and what the outcome will be is problematical. Were future prices to be based entirely upon the stocks held, it would not surprise us to see hops worth 50 per cent more before the new crop is available; but it is more than evident brewers are using substitutes in such quantities as to reduce their demands far below those of former years. It is therefore apparent that they hold the strongest position at present, and that they are not likely to allow any great advance in prices. The New York *Bulletin* says of the market:

"The market continues unsettled, with prices wholly nominal for anything in the way of round lots, the decline thus far failing to induce brewers to purchase in other than a hand-to-mouth way. There is a chance that dealers would take hold a little at about 70c for choice goods, but when it comes to anything above that purchases are limited to what may be convenient to fill orders from brewers. The latter seem to be getting desirable goods on the basis of 75 cents."

Quotations in the New York market on Saturday were as follows:

N. Y. State, crop of 1882, choice.........	@ 75
do crop of 1882, mediums......	70@ 72
do crop of 1882, low grades.....	67@ 68
do crop of 1881, good to prime..	70@ 75
do old olds....................	60@ 65
Eastern, crop of 1882, fair to choice.....	70@ 75
Wisconsin, crop of 1882, fair to choice...	none.
Pacific coast, crop of 1882, fair to choice..	68@ 72

Of the foreign markets Messrs. W. H. & H. LeMay of London, say in their last circular:

"The consumptive demand still keeps good, and prices are extremely firm; and in some descriptions an advance has to be paid to secure what is wanted. Old hops are being taken again by English brewers. Choice continental hops no longer exist, either here or on the Continent. Nuremburg market is still advancing, their brewers being (with few exceptions) without any stocks whatever. There is a demand here for Americans at full rates."

Barley was received here the past week to the amount of 9,454 bu., and the shipments were nothing. The visible supply of this grain in the United States and Canada on May 12, was 890,042 bu. against 1,020,000 bu. the previous week, and 264,406 bu. the corresponding date in 1882. This shows a decrease in the visible supply during the week of 129,958 bu. The stocks held in this city on Saturday last amounted to 650 bu., against 650 bu. the previous week, and 2,138 bu at the corresponding date in 1882. Whatever sales are made are by sample, and do not find their way into published reports, but receivers quote the market dull and unchanged, with prices at a wide range, according to quality and condition of samples. Good bright barley of full weight would be taken at $1 70 per cental, but most of the sales are made at from $1 25@$1 50. The receipts are small, but the demands are equally so. In Chicago the market is reported lifeless, so far as speculative dealing is concerned, with trading confined entirely to sample lots. No. 3 Western is quoted there at 56@57½c per bu., and 80@82c per bu. for No. 2. The barley market appears to have settled into a state of chronic dullness.

DAIRY PRODUCTS.

The market has weakened since our last report, under the influence of warm weather and increased receipts. A considerable quantity of fresh roll butter was received, and the warm days of the past month spoiled its attractiveness. Good fresh made crocks command 18@19c ℔ lb for such lots as are all right in quality and flavor, but considerable quantities have been received that did not reach within two or three cents of these figures. Creamery stock is quoted steady at 25@28c ℔ lb, with a ready outlet for all coming forward. But our market shows only a slight decline as compared with others, the Chicago market under a light shipping demand and increasing receipts has dropped three to four cents ℔ lb during the week on best grades, and is dull at the decline. Quotations there are as follows: Fancy creamery, 23@24c; fair to choice do, 20@22c; choice dairy, 17@19c; fair to good do, 15@16c; common grades, 12@14c. In New York the market is also weak and lower than at last reports, with a slow demand. Shippers are not able to do anything at present, and local buyers are only purchasing as compelled to. The *Daily Bulletin* says of that market:

"Creamery still shows the greatest heaviness and while there is an inclination to quote at 'about former rates' the very best can be selected at 26c, with some very fine at 25c and a great many Iowa and kindred grades available at 24@24½c. State dairy half-tubs will not exceed 24c to jobbers and 23c is the top on Welsh, except here and there small selections where buyers have not been shopping around to become posted. In short, it is simply a flat, tame market throughout and holders feel the more discouraged in view of the fact that the reduction on cost as yet fails to stimulate interest among customers or increase the demand, and the indications are that supplies are moving forward with greater freedom, yet all hands agree that the only apparent hope is to keep the tone just as easy as possible or else sit quietly and see the imitations secure a large portion of current trade. Western stock not over plenty but weak and irregular in value."

In that market quotations on new State stock are as follows: Fancy creamery, 26c; choice do, 25c; fair to good do, 21@22c; ordinary do, 17@20c; fancy tubs and pails, 24c; choice do, 22@23c; good do, 19@21c; and fair do, 16@18c ℔ lb. Quotations on new western are as follows:

Western imitation creamery............	18 @20
Western dairy, good to prime..........	14 @17
Western dairy, ordinary to fair........	11 @12
Western factory, fair to good..........	12 @14
Western factory, ordinary..............	9 @10

In this market cheese has ruled steady the past week, with no change to note in values. New cheese is selling at 13@14c ℔ lb, the latter figures only for choicest makes, with receipts and demands about evenly balanced. Other markets, however, are not in such a favorable condition, and lower rates are the rule at all the leading ones both east and west. In Chicago the decline has been general on all grades. Quotations there are as follows: Full cream cheddars, ℔ lb., 13@13½c; full cream flats, 13½@14c; flats slightly skimmed, 10½@11c; common to fair skims, 8@9c; low grades, 3@6c ℔ lb. The New York market is also lower, and the tone has not been improved any by the decline in values. Quotations there are as follows:

State factory, prime..................	12½@
State factory, fair to good............	11½@12¼
State factory, part skims..............	10½@11½
Creamery skims, choice................	7½@7¾
Creamery skims, good..................	6¾@7¼
Creamery skims, fair..................	6 @6¼
Skims, po-..........................	5 @5¾
Ohio flats, choice....................	12¼@12½
Ohio flats, good to prime.............	11 @12

The *N. Y. Commercial Bulletin* says of the market:

"Cheese has an unsettled and shrinking market, with very light margins for receiver on any goods, and in some instances none at all. The commencement was in the country, and under the decline made there a standing off took place here until concessions had been granted, and then a few buyers came in to fill orders. A number, however, paid no attention to the market in the absence of ability to see a margin, and there was quite enough stock to go around. We do not discover that there is any preconcerted arrangement to 'bear' the market, but shippers simply stand off because it is evident that, aside from 'the first of the new crop' lots sent over, there will be little chance for cheese except at much lower cost, the home make being marketed earlier than usual, and many of the old lots still remaining on hand. At the close the position is tame at ½c ℔ lb decline from one week ago, with some stock likely to carry over."

The Liverpool market is quoted steady at 67s. per cwt. for choice American cheese, the same figures as were ruling one week ago.

WOOL.

The wool markets at the east are in a state of masterly inactivity at present, with buyers few in number, and those only in search of small lots to meet present emergencies. In fact there is nothing desirable to buy at the moment, and manufacturers are looking forward to the advent of the new clip as their only chance to get such wools as they require. In the New York market the amount of stock offering has been limited, especially of anything of an attractive nature in domestic fleeces, and many dealers report stocks about closed out. This is also the case in both Boston and Philadelphia, and the commercial press are wondering why the short supply does not strengthen the market; but this is readily accounted for from the unsatisfactory condition of the wools in stock and the fact that the woolen goods market has been greatly depressed for months and is still very unsettled. The New York *Commercial Bulletin* says of the market:

"From manufacturers come the usual complaints of a dull and unpromising goods market, and the small lots of wool they manage to get along with confirm the assertions. New California and Texas are commencing to appear, and a few parcels of Southern are also at hand. Carpet wools at the moment are quiet, except now and then small lots taken to carry manufacturers along until they are ready to handle the accumulations held in bond and awaiting the change in tariff."

Some new Texas has arrived there but in the report of sales it is quoted as sold on "private terms." As to the Boston market the following from the *Advertiser* seems to be a fair statement of its present position:

"The market has varied but little from that of the past two weeks. If a dealer wanted to sell he would surely have to make some concession in price except for one or two descriptions, which are scarce and wanted; but in the ordinary course of business prices are weak. The price of wool, therefore, depends largely whether the dealer wants to sell, and whether the manufacturer who is going to buy is going to pay. The market is only having a retail demand, so to speak, and how long it is to continue seems to be a great conundrum for the trade. Some claim that the market will have to go lower; that the mills are not going to want wool, since their goods are not selling, and only those that have specialties will be really busy. The others claim that the market will in a few weeks become excited, as is usual when the new clips are being marketed; that prices in the country will be held high by manufacturers buying there instead of waiting until the wool reaches here and accumulates. There is certainly considerable precedent for this latter, and the former view is dependent upon the general condition of the trade of the country. The outlook is not just what it should be to impart strength to any merchandise."

The *N. Y. Economist*, as usual, has a long jeremiad upon the misfortunes and guilelessness of manufacturers. It seems to have forgotten its pen pictures of the large-headed, enterprising, wealthy men who made up the guests at the recent "wool banquet," and the unctiousness with which it detailed the countless millions of capital represented. It should remember that these men are still in the trade, and are not spring chickens needing the chuckings of an old hen to prevent them from getting into danger. They are not likely to put out a dollar that they do not believe will return them a profit, and they have had experience enough to know what to expect. That paper says:

"The following letter came to us from the heart of Texas, dated San Antonio, May 1, 1883, but we failed to find space for it in our last issue:

"'Market very active. Buyers numerous. Wools quickly taken. Can buy Spring, seven months' growth, fine and medium, shrinkage not to exceed 52 to 56 per cent (?) at 23@25c. Have sent samples by mail.'

"Yes, we don't care a fig what the samples are. We know these wools will be more likely to shrink 58@62 per cent. No Texas wool is worth this price on the ranches, for it is every mill the wool is worth in this market. Now, there ought to be at least a difference in the selling price here and there of three cents a pound. And then, there is shrinkage, tare, [tear of mind is what appears to trouble the editor] loss of weight, (13 pounds of stone came out of one bag not long ago), charges, loss of interest, insurance, cost of buying, buying for cash and selling at 60 days without interest, and sometimes dating 15 days ahead. When is a dealer going to get his money back by operations of this sort is now the great conundrum. Echo answers, never."

The same paper publishes the following dispatch from San Francisco, under date of May 18, with characteristic comments:

"Considerable wool selling. A Boston man is the largest buyer, taking a good deal, (one million and a half pounds) chiefly southern, ranging from 18c to 20c. Several others are buying freely. Not much northern received yet. The extreme price is 25c. The range of Col. is 20@23c. The receipts of new spring mount up to 25,000 bags. The condition of the clip is about the same as last year."

The second series of London Colonial wool sales opened on the 16th inst. with 341,000 bales, containing only a small proportion of good to choice stock and considerable competition on Australians. Later advices report: "Good Australians steady at March rates, but defective rather easier; domestics steadier; carpets flat."

From the Texas *Wool Grower* we take the following report of sales in that State:

Major Beauregard received 432 bags during the week from Dobson & Buckley, Maurice Bros'. and Lawrence Haley. He sold the Patterson & Bundy clip, 43 bags, good medium, for 22c.

T. C. Frost received 163 bags, and sold 9 for 22c, 11 for 25½c, 12 at 24c, 7 at 22c, 12 at 21c, 8 at 23c, 5 at 21c and 7 at 22c.

Staffel and Vogel received 151 bags, and sold 1,300 lbs. at 21c, 510 at 24c; 500 at 20c; 1,800 at 15c; 20,000 at 20c; 4,500 at 21c; 300 at 20c; 1,500 at 15c, and 4,500 at 25c. Mr. V. has refused 25c for the Adolph Real clip mentioned in our last issue.

B. Oppenheimer & Co. received during the week 153 bags and sold considerable medium wool at prices ranging from 20 to 22½ cents, and embracing A. Faltin's clip, Kerr county, 10 bags, 12 months, fine, which brought 25 cents.

Bergstrom & Mauermann received the Joe Kelley clip, Uvalde County, 15 bags, fine, sold for 22. They sold 41 bags at 20 cents and 28c fine medium six months at 22c.

Halff & Bros, received 211 bags and sold none. Halff will hold the wool consigned to him for better prices and with all others of our commission men and merchants with whom we have conversed, endorses the position we have taken as regares the effort of buyers to force down prices.

Outhout & Nash received during the week 651 bags at their warehouses, and have 400 at the depots. Their sales were some 12 months' wool at 24½ and 25. No large clips were sold.

Mr. W. J. Lawrence, of Battle Creek, asks us to correct an error made by him in reporting the shearing held at Battle Creek recently. A *ram* owned by Mr. Wm. Radford, of Marshall, was reported as shearing 20 lbs., 6 oz., whereas it should have been a *ew*.

BUTTER PACKAGES.

A subscriber at Ionia, who, by the way, thinks we talk a good deal about poor butter (she would too if she had to eat it or nothing for a considerable period each year), asks what kind of a package we would recommend in which to pack butter to keep. We think the one described by the late X. A. Willard, at a meeting of the Vermont Dairymen's Association is as good as any we have heard of. It was a tub somewhat tapering, with heavy staves and heads, made perfectly tight so as to insure against any leakage. In packing, this tub is turned on the small end and a sack of cotton cloth is made to fit the tub, and into this the butter is packed until it reaches to within an inch of the groove for holding the head. A cloth is next laid upon the top of the butter and the edges of the sack brought over this and neatly pressed down; then the head is put in its place and the hoops driven home. The package is turned upon the large end and the sack of butter drops down, leaving a space on the sides and top. Strong brine is then poured through a hole in the small end until it will float the butter. The hole is now tightly corked, and the buttter is pretty effectually excluded from the air.

The Fruit Prospects.—Mr. T. T. Lyon, President of the Michigan State Horticultural Society, sends us the following from South Haven in regard to the outlook for fruit in that vicinity:

"We had a surfeit of rain last week; and are but just able to begin planting again. The weather is steadily cool, and growth very tardy. A few strawberries have been in blossom for two weeks past; but many of these are killed—probably by the freeze of a few nights ago. Peaches are yet too little developed to be endangered; and vegetation generally is very backward. The forest hardly yet shows a tinge of green—the result, doubtless, of the unusually large accumulation of ice in Lake Michigan last winter. The result is likely to be the hibernation of bloom till all danger of frost is past for the season. At least in this vicinity, the prospect is yet good for a full crop of fruit."

H. D. McKinney, of Janesville, Wis., has sold to Jas. A. LaMansey, of Lawrence, Kansas, the five-year old trotting mare Bronze for $5,000. Her sire was Morgan Messenger, and her dam by Denmark. Her best time, made when four years old, is 2:25¼.

On Thursday, June 7th, Messrs. Pickrell, Thomas & Smith will sell at Harristown Station, Macomb County, Ill., about 80 head of Shorthorn cattle; Rose of Sharons, Young Mary's and other popular families. This sale ought to command the full attention of fine cattle breeders, farmers and others. The herd is made up of bulls, cows and heifers; each animal bears a full pedigree in the Herd Book. This sale will afford a rare opportunity for purchasing Shorthorn stock. Col. J. W. Judy will conduct the sale. Catalogues may be had by addressing J. H. Pickrell, Harristown, Ill.

NEWS SUMMARY.

Michigan.

John Hayes, merchant of Adrian, died very suddenly on the 16th.

It will take 1,200 cords of stone to repair the broken dam at Niles.

Lexington authorities have fixed the bonds of liquor dealers at $3000.

The office of the Mt. Clemens Press was damaged by fire on the 18th.

A resident of Charlotte claims to have 25 breeds of thoroughbred chickens.

Bad Axe is raising a bonus for a foundry and machine shop, to be located there.

The planing mill of the Deer Lake Company, at Ishpeming, was burned on the 16th.

Sixty-four liquor dealers have paid $16,130 into the treasury of St. Clair County.

Hillsdale had a hailstorm last week in which hailstones 10½ inches in circumference fell.

Market quotations in the Owosso Press quote beef "almost any price you have the face to ask."

Senator Palmer is to address the Western Michigan Farmers' Club at Grand Rapids, June 5th.

A new $6,000 grain elevator will be built at Mt. Clemens this season, which will hold 45,000 bushels of grain.

Hon. Albert B. Slocum, of Wheatland, Hillsdale County, a well-known citizen and old settler, died last week.

Ovid Register: Mrs. Yarriger, of Shephardsville, last year sold 579 dozen eggs from 80 hens, for which she received $102.

Fruit tree planting has been extensively engaged in by the inhabitants of the burned districts of the Huron Peninsula this spring.

The Coldwater Republican estimates the damage done by the cyclone last week to property in Branch County at not less than $50,000.

Wm. Burns, laborer on the T. & M. railroad, was killed by a passing train while walking on the Grand trunk track near Battle Creek, last week.

The Nashville News is justly severe on the hanging in effigy, which is indulged in in that village as an expression of popular disapprobation.

The Allegan Tribune crows over the fact that though they had a circus in town one day last week, not a single arrest for drunkenness was made.

An attempt was made last week to burn the freight depot at Sterling, by saturating a quantity of hemp with kerosene, and setting fire to it.

The telephone line between Grand Haven and Ionia was opened on the 18th. The line also connects Grand Haven with Greenville and Stanton.

There is a prospect that tamarac lumber will some day be an article of value, it having been discovered that it is as good as cedar for street paving purposes.

A company has been formed in Grand Rapids for the purpose of organizing a cattle and sheep ranche in Northwestern Kansas, with a capital of $25,000.

Although the spring is late a correspondent of the Mason Democrat says the cabbage butterfly is around on time, looking for a place to start in business.

Mr. and Mrs. Chinnock, near Battle Creek, had a "family jar" circus day. Mr. Chinnock went to the circus, and Mrs. Chinnock went somewhere else and has not been seen since.

A correspondent of the Ann Arbor Argus, writing from Chelsea, says that though growing wheat has improved much the crop will not be over three-fourths of a yield in that vicinity.

The Elk Rapids Iron Company will again begin making pig iron the last of this month. It has been shut down for repairs and because it could not secure sufficient wood for charcoal.

The body of John G. McIntosh was found near Roscommon last week, where it had evidently lain for several days. It is believed he wandered away while insane and perished from exposure.

A train of 40 new freight cars, all painted alike, created comment along the line of the Michigan Central last week. They were on the way to Manitoba, for use on the Canadian Pacific line.

A woman named Wirth cowhided a prominent business citizen of Adrian on the street last week, her husband looking on unconcernedly. She alleged the prominent citizen had insulted her.

The new hospital of the Sisters of Charity, to be built at Big Rapids in place of the one burned some time ago, will be larger and better than the old, and will cost twenty-six thousand dollars.

At Niles, on the 15th, Mrs. C. Jewett started to drive home from a tea-party she had been attending, and when the horse reached home was found in the carriage dead. Heart disease or apoplexy was the cause.

Adrian Times: A resident of Palmyra who recently whipped his son for calling him a liar, was arrested next day at the instance of the boy and his mother, for assault and battery. Sweet peace does not dwell much in that family.

The Buchanan Record lately noted a remarkable anniversary, that of a couple who celebrated their eightieth wedding day anniversary. Mr. and Mrs. Johnson, of Royalton township, are the parties, Mr. J. is 104, and his wife 103 years old.

Pine logs have been floating down the river at St. Louis, Gratiot County, at the rate of 1,500 per hour for weeks past, and will continue to do so for weeks to come. As all the logs are worth from $1 to $5 each, the wealth which they represent is enormous.

At Lapeer, on the 18th, six masked men attacked and blindfolded W. F. Croft, city marshall, and locked him up in a blacksmith shop. They then attempted to open the safe of J. M. Wattles & Co., bankers, but were frightened away, leaving their tools.

Battle Creek Journal: D. Caine, of this city, has gone to Dakota, where he expects to plant 300 acres of the Mexican tree bean. He has invented an implement for harvesting beans which will pull three or four rows at once and gather in 15 or 20 acres a day.

At Saranac, on the 15th while a man who was putting up telephone wires was at the top of a pole 30 feet high the team started and so tightened the wire as to knock him from the pole. His fall fractured his spine, and there is no hope of his recovery.

The Ann Arbor Argus, hard put to it to find the benefits of the extremely late spring, mentions as a "mercy" that the water has been so cold that small boys could not go in swimming, consequently fewer than usual of that interesting class have been drowned.

Port Huron Times: Last week the village of Brockway Center was visited by a fire which wiped out the Sheldon gristmill, the main interest of the village, and an adjoining store, believed to have been the work of an incendiary. Loss, eight thousand dollars.

Jacob Estey, of Shaftsburg, Shiawassee Co., was plowing in a field near the railroad when his team took fright at a passing train and turned suddenly. The plow handles struck him, knocking him down and inflicting such injuries that he died in a couple of hours.

The Hastings Banner figures out that the citizens of that place will this year spend $8,000 on circuses, $23,000 on tobacco and $30,000 on saloons, and then pleads for at least half of the total $61,000 for a new railroad. The argument for the railroad is capitally well put.

A daughter of A. S. Bowen, of Rollin, Lenawee County, has suffered for some time from pains in her head and discharges from her ear. The cause was last week discovered to be a brass glove button which had got into the chamber of the ear and had been grown over.

A farmer living near Lansing who had a horse killed by the cars, sued the company and got judgment, but his lawyer's fees came to within 75 cents of the judgment, so he generously turned over the whole sum to the lawyer and thanks Heaven he got off so easy. 'Twas ever thus.

Mrs. Wildsmith, of Kalamazoo, missing her four-year-old boy, was impelled to search the cistern, though the water seemed undisturbed. The pole fastened in the child's clothing and she drew him out, apparently dead, but her own rare presence of mind and prompt medical aid finally restored him to consciousness.

Eugene Angell, banker, of North Lansing, has made an assignment, caused by the deficit of the city treasurer, who obtained $7,400 on individual notes and an indemnity bond said to be invalid, depositing no collateral. There was a run on the bank on the 16th, and the doors were closed. The loss falls mostly on poor people whose loss aggregates $20,000, the total liabilities being $40,000.

Monroe Democrat: Harry Dansard, clerk in the bank here, bought five grains of morphine, telling the druggist he wanted to "kill a cat." He swallowed the dose in presence of the druggist, who promptly administered an emetic which Mr. D. was not loth to take after being informed of the probable effect of the dose. He was not posted as to the quantity which can be safely taken to allay pain, and hereafter will have a physician prescribe for him, as he had no intention of committing suicide.

The storm which visited St. Joseph County last week was the most violent and destructive ever known there. It was in fact a cyclone. At Sturgis, C. Gilham and his three sons were severely injured, and barns and outbuildings thrown down, houses unroofed, trees uprooted and some stock killed. Near White Pigeon the sides and roof of a schoolhouse were taken up bodily and carried away, leaving teacher and pupils unharmed. The house of Peter Mook, next in the track of the storm, was leveled with the ground, and his son William was instantly killed. No further loss of life is reported, but the destruction of property is great, and falls principally upon the farming community. Burr Oak, Quincy and Coldwater report heavy rain and hail, some of the stones being thirteen inches in circumference, breaking glass and injuring crops.

General.

America had 72 earthquake shocks last year.

The Nicaraguan town of San Carlos has been completely destroyed by fire, loss $100,000.

Ten million dollars were required to meet the payments due on pension claims this month.

The first peaches of the season retailed in New York on Monday at $1.50 apiece as curiosities.

Edward White's canal stables, with 35 horses, burned at Albany, New York, last week; loss, $50,000.

About 60,000 miners were represented in the inter-state convention of miners at Pittsburg, last week.

The estate of Amasa Stone, who committed suicide a few weeks ago, is valued at ten million dollars.

Kansas farmers now hold over 5,000,000 bushels of old wheat and over 37,000,000 bushels of old corn.

Large numbers of sailors belonging to ocean steamers at Montreal are deserting daily to take service on the upper lakes at higher wages.

The collector at Richmond, Va., sold stamps for 2,000,000 pounds of tobacco on May 1st, and 36 carloads were sent from Lynchburg on the same day.

A final dividend of seven per cent in favor of the creditors of the Freedman's Savings Bank of Washington has been declared, making in all 62 per cent.

The fire at Harrodsburgh, Ky., last week, consumed 24 houses, including the Presbyterian church. The loss will not exceed $45,000; insurance, $28,000.

At Montreal, on the 18th, a freight train struck a team just being driven across the track, and the two occupants of the wagon and the horse were killed.

Bricklayers brought from England to Hamilton, Ont., to take the place of strikers, joined the malcontents and left their would-be employers in the lurch.

A land slide on the Dakota branch of the C. M. & A. P. R. R., near Sioux City, last week, caused 600 feet of the track to disappear into the Missouri River.

The lockout of shoemakers at Cincinnati extends against all union men, and between three thousand and four thousand are out of work in consequence.

Miss Bragg, a niece of Gen. Bragg, of confederate memory, saturated her clothing with coal oil last week at Benham, Tex., and then set fire to it. She will die.

Quite a novel spectacle was witnessed at Pensacola, Fla., recently, in the way of funerals. A drayman died and his brother draymen attended his funeral on drays.

Plans have been submitted to the New York City Bureau of Buildings for a fifteen story flat house, to accommodate 38 families, and which will be one hundred and eighty-two feet high.

A Buffalo company has bought 20,000 acres of land in Washington County, Pa., with a view to putting down gas wells and furnishing heat, light and power for factories at Pittsburgh.

John Pawson burned to death in the destruction of his house at Bracebridge, Ont., last week, while attempting to save his children, one of whom, a boy of ten years, perished in the flames.

Girls employed in Behrman's cigar factory, at Chicago, work from six in the morning till nine at night, for $3 per week, and their generous employer charges them a cent a minute for lost time!

The Army of the Potomac held a grand reunion at Washington on the 16th and 17th. The attendance was large the enthusiasm great, and the "vets" had a good time fighting their battles over again.

The bodies of two of the men who lost their lives during the fire at the Standard Oil Company's works, were found in the bay near Jersey City last week, where they had evidently been blown by the explosion.

Josh Billings thinks he is the best paid writer in the business, as he recently got $400 for 12 words. This came from a wealthy New York merchant who wanted one of Josh's quaint sayings for an advertisement.

One hundred and sixty-six petitions containing 12,944 signatures, have been presented to the Canadian parliament, praying for legislation to secure a better observance of Sunday in the running of railroad trains.

The wife of Rev. E. L. Stoddard, of Jersey City, N. Y., was accidentally shot dead in her elegant home there last week. In removing a revolver the trigger struck an obstruction, exploding the charge with fatal result.

The works of the Parrott Varnish Company at Bridgeport, Conn., burned on the 17th, with $30,000 worth of varnish and $40,000 worth of raw material, or a loss of $70,000. The fire is supposed to have been of incendiary origin.

Toledo is worked up among her business population because of seemingly systematic mail robberies, which have been in progress for months past. Hundreds of dollars mailed to her business men in letters have failed to reach them.

John W. Woodhull, grand secretary of the Wisconsin grand lodge of ancient and accepted masons, who is also a knight templar in high standing and secretary of the Milwaukee masonic union, is reported $4,000 short in his accounts.

A Boston and Montreal express train, on the L. & C. V., road was derailed on the 17th, at East Granville Vt., by a misplaced switch, wrecking several cars and the depot, killing Mrs. Lucia Spalding and seriously injuring the engineer.

Steps are being taken at San Francisco to organize a national wool growers' association. The objects are to exert influence in the passage of laws to promote the wool industry in this country and repeal the law reducing the tariff on wools.

J. H. Saunders, of the United States Cattle Commission, is about to start to Europe on a special govermental mission, having special reference to the restrictions on the American cattle trade with Great Britain and pork trade with Germany.

The Choctaws of Indian territory now desire to give colored people therein citizens' rights and get the $300,000 promised them in 1866 by the government for so doing, though the promise is outlawed by lapse of time granted in which to accept it.

At Harrodsburg, Ky., Congressman Phil. Thompson, on trial for the shooting of W. H. Davis for seducing his wife, was acquitted by the jury. The verdict was in accord with the popular sentiment, and Mr. Thompson was warmly congratulated.

A girl named Willey, employed as domestic in a family at Franklin, Mass., attempted to poison the whole family. Paris green was found in the flour barrel, and medicine an invalid was taking was found to have been poisoned. The girl has disappeared.

Anton Baur, saloon keeper of Chicago, shot and instantly killed Lawrence Rossiter in a dispute about the payment of five cents for a glass of beer. Bauer then barricaded the top floor of his house, and it took the entire police force of two divisions to dislodge him.

An enormous land slide occurred on the 15th on the bank of the Yamachiche River, in the Province of Quebec, carrying several acres of land into the stream and blocking the current for a long distance. The water is rising fast in the river, and further danger is apprehended.

There was a fearful cyclone in the vicinity of Racine, Wis., which, on the 19th, demolished the northwestern part of the city, killing twenty persons, and more or less injuring a much larger number. The same storm also visited Chemung, Ill., Alden, and other small places, everywhere leaving death and destruction behind it.

There are 60 vacancies in the grade of second lieutenant in the army, which will be filled by 52 graduates of West Point next month, four non-commissioned officers of the army who have passed the necessary examination, and four appointees from civil life. For the latter honor over 200 applications are on file in the war department.

The steamer Granite State, plying on the Connecticut river, took fire on the 18th at Goodspeed's landing, thirty miles below Hartford. The engineer stuck to his post like a hero, though his hair and clothing took fire, and steered the boat for the dock, but although a ferry boat steamed alongside, and rescued many passengers, five lives were lost. The vessel was loaded with kerosene.

Foreign.

An underground telegraph is being laid between Paris and Marseilles.

Spain is seeking direct cable connection with Cuba by way of Bermuda and the Azores.

King Cetewayo's forces in Zululand have been utterly routed by those of Chiefs Oham and Usibequ.

Gen. Von Moltke, who is nearly eighty-three years old, is in robust health and has gone to Switzerland on an extended furlough.

Daniel Curley, one of the Phœnix Park assassins, was hanged on the 18th. He practically admitted his guilt before his execution.

The London Times says, in variety and illustration, the United States collection at the fisheries exhibition is not surpassed by any foreign contributions.

It is stated that 120 members of the House of Commons have sent a memorial to Gladstone asking the introduction of a bill granting the right of suffrage to women.

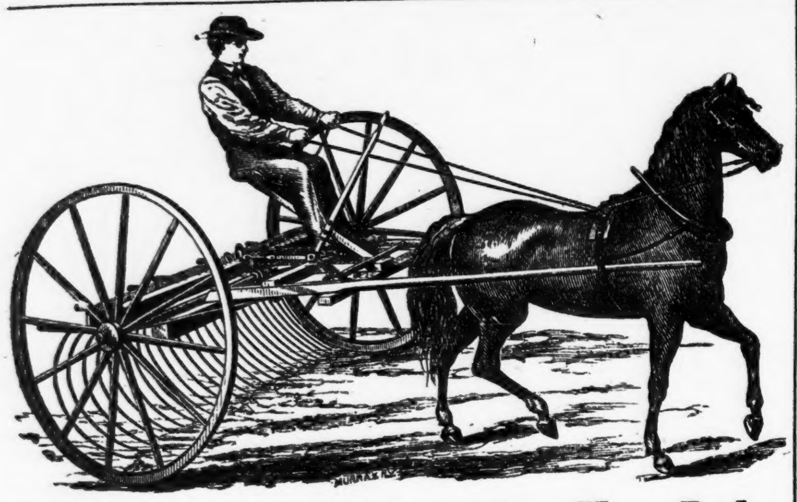
Informer Carey has been released, but there is a strong feeling against him, and though his house is strictly guarded, it is believed his life will not long be spared.

At the meeting of the Suez Canal Company in Paris, June 5, a proposal will be made to construct another Suez canal, parallel with the existing one, at a cost of one hundred and twenty million francs.

The Dublin grand jury have found true bills for conspiracy to murder against Kingston, Gibney and Healey, charged with conspiracy to murder Poole, and a true bill for threatening murder against Matthias Brady, who was charged with making threats against the life of the foreman of the jury which convicted his his brother, Joe Brady.

NEW ADVERTISEMENTS. NEW ADVERTISEMENTS.

WOODFORD & NILES.

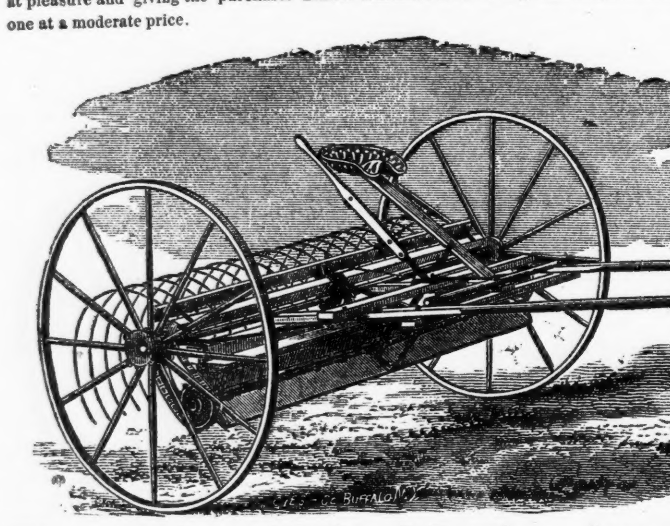


The Tiger Self-Operating Hay-Rake

— MANUFACTURED BY —

J. W. STODDARD & CO., - DAYTON, OHIO.

THE TIGER is the Leading Rake all over the World. The standard of comparison for all others and superior to all its imitations. It has double the sale of any other Rake in the World. If desired it can be bought with Grass Seed and Plaster Sower Attachments that can be attached and detached at pleasure and giving the purchaser **Three Distinct and Complete Implements** combined in one at a moderate price.



Tiger Rake with Seed-Sowing Attachment

Our Seed-Sower Attachment to Tiger Rake for sowing broadcast all kinds of grass seed and flax seed, will be found to be a very useful and convenient attachment. It is easily and quickly attached and removed from any Tiger Rake, except the Two-Horse Tiger. It can be regulated to sow any desired quantity, and will sow the seed much more rapidly and evenly than can be done by hand, and will supply the wants of many farmers who have made application for an implement of this kind.

THE PRICE OF THIS ATTACHMENT IS $9.00.

Tiger Rake with Plaster-Sowing Attachm't

Every one who has tried it, knows the hard work and unpleasantness that attends the sowing of plaster by hand, and the difficulty of sowing it evenly, especially when lumpy.

We offer a Plaster-Sower Attachment to the TIGER RAKE, which will be found to accomplish the work in a very satisfactory manner.

It will also **Sow Ashes, Bone-Dust, Lime, and all Fertilizers** in any quantity desired.

It sows a breadth of six and one-half feet. This attachment is very simple, easily managed, and is strong and durable.

PRICE $15.00.

THE NEW TRIUMPH GRAIN-DRILL.

Sows All Kinds of Grain and Grass Seed Without Change of Gear-Wheels.

The Most Regular Grain Sower in the Market

The above cut represents the **NEW TRIUMPH DRILL** with **Seat Attachment, Front Lift** and **Lever Hoe Shifter.** While upon this Drill is used the same unrivalled force feed used upon all the Triumph Seeding Machines, new and valuable improvements have been added, which place the **NEW TRIUMPH** in advance of all other drills in the market.

While from the seat the operator has *full control of the team,* he can at the same time *oversee the working of the Drill,* and *with perfect ease govern every operation of the machine.* By means of the lever at the right hand, he can raise and lower all the hoes simultaneously, or by means of the chains can raise and lower them separately. By means of the lever at his left hand the hoes can easily be shifted back and forth from straight rank to zigzag, while the hoes are in the ground and the Drill in motion. Thus the operator can by shifting the hoes back and forth, while at work, clear them from trash that may accumulate, and reset the hoes in straight rank or zigzag, as may be desired.

Another valuable improvement found on the New Triumph Drill, is the new style of **Front Lift,** by the use of which the lift bar used upon other drills is entirely dispensed with. The seat is made adjustable so that it can be moved back and forward, thus making it easy to properly balance the machine, whether the operator be light or heavy. If desired the seat attachment can be removed entirely, as the Drill is so constructed that it can be operated equally well with or without the seat.

The Land Measure, Regulating Plate, and Gauge Plate are all on the rear of the hopper and in full view of the driver. The Grass Seeder is attached in front of the hopper. The seed can be sown in front or rear of the hoes by simply turning the scatter board so as to slant to the front or rear as desired. The seeder can be thrown out of gear when not in use and thus avoid unnecessary wear.

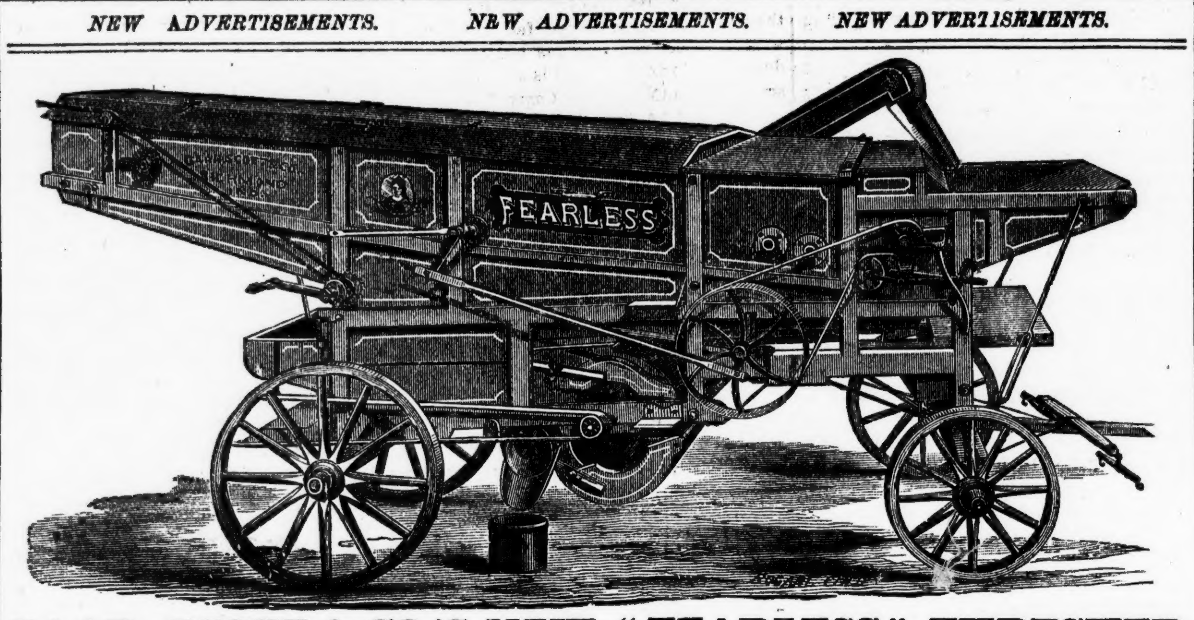
For Terms, Price and Catalogue, address

Woodford & Niles,

State Agents for Michigan,

33 Woodward Avenue, - - Detroit, Mich.

NEW ADVERTISEMENTS. NEW ADVERTISEMENTS. NEW ADVERTISEMENTS.



GAAR, SCOTT & CO.'S NEW "FEARLESS" THRESHER.

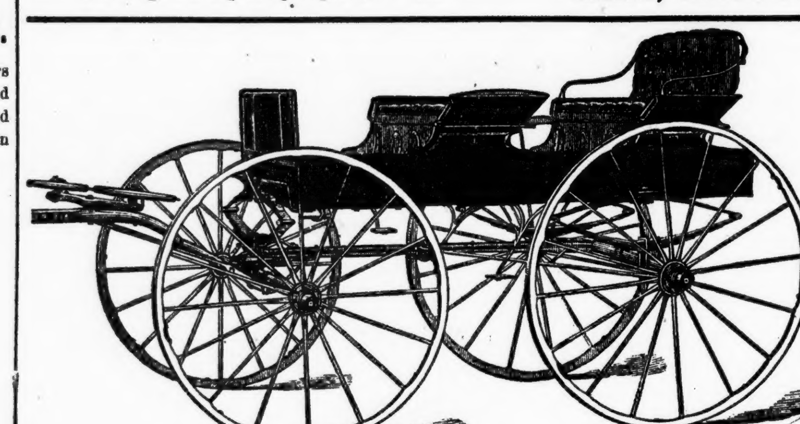
A Beautiful Model! A Handsome Machine! A Strong Frame!

New Principle of Separation! Simple in Construction! Superb in Operation! Grand In Results.

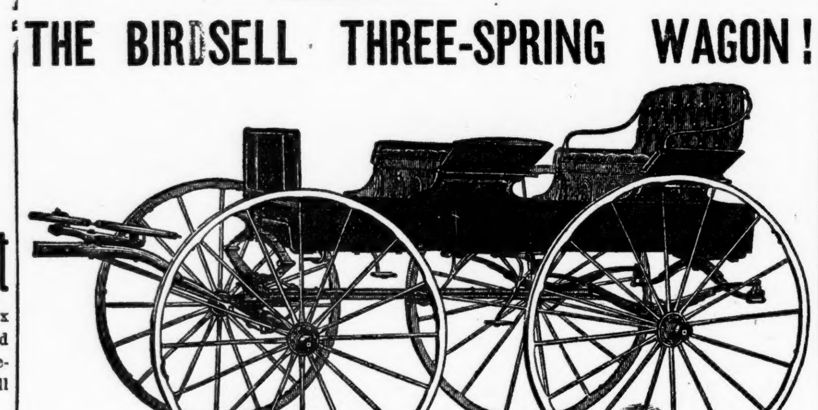
Will Thresh Faster and Save Grain Better than any Machine Made!

OUR NEW INDEPENDENT ADJUSTABLE STRAW-STACKER IS NOW READY. SEND FOR A CIRCULAR.

For large descriptive pamphlet, address **CARR, SCOTT & CO., Richmond, Indiana.**



THE BIRDSELL THREE-SPRING WAGON!



BIRDSELL COMBINATION-SPRING WAGON!

The three spring and half platform, or combination-spring wagons we here illustrate, we are

MANUFACTURING AS A SPECIALTY.

We believe ***there is a Growing Demand*** for this class of work made of

STRICTLY FIRST-CLASS MATERIALS!

and finished in a first-class manner. We do not aim to compete in price with the many inferior grades of spring wagons upon the market. Our prices are as low as the high quality of our goods will admit. Our facilities for producing this class of work are second to none in this, or any other country. It shall be our whole aim to produce a wagon combining more points of excellence than any other manufactured.

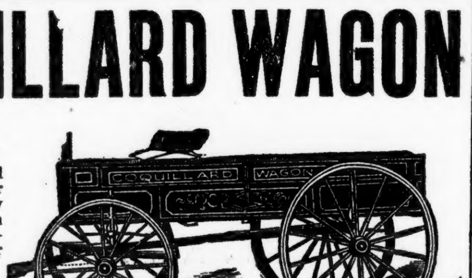
We warrant these wagons to be strictly "A" grade throughout, and any breakage occurring within two years, where the workmanship or material is at fault, will be replaced by us free of charge.

Call on your nearest dealer, or address

BIRDSELL MANUFACTURING COMPANY, South Bend, Indiana.

THE COQUILLARD WAGON

THE FARMERS' FAVORITE.



These wagons are made of the best wood and iron to be procured, and put together by the most experienced workmen. Every one warranted to give satisfaction, both in regard to the quality of material and workmanship. They are also noted for their lightness of draft and ease of running.

Carriages, Buggies & Sleighs

of superior workmanship always on hand.

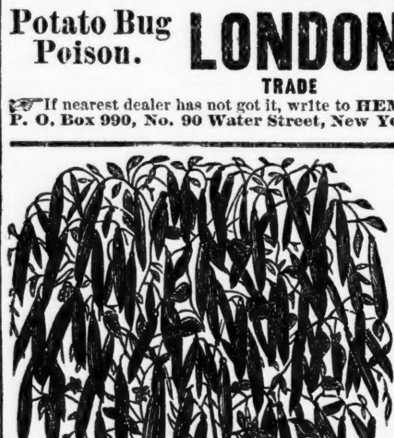
☞Send for circular and Price List.

A. COQUILLARD, South Bend, Ind.

Potato Bug Poison. **LONDON PURPLE** Potato Bug Poison.

TRADE MARK.

☞If nearest dealer has not got it, write to **HEMINGWAY'S LONDON PURPLE CO., Limited P. O. Box 990, No. 90 Water Street, New York,** who will send prices and testimonials.



TREE BEANS.

S. M. ISBELL & CO.,

Jackson, Mich.,

have on sale a limited quantity of this unusually prolific variety, which they know to be true, same having been grown upon the "Isbell" farm, and which they offer at the following

LOW PRICES.

Small packets, postage prepaid, 10 cents, enough to plant three rods of ground.

		Price.	Postage Extra.
1 pt., sufficient to plant	¼ acre....	30c	15c
1 qt., " " "	½ "	50c	30c
2 qts " " "	1 "	80c	60c

When cheaper will ship by express, and send beans for difference between this and postage.

SINCE THE REDUCTION TO PRESENT PRICES orders have been coming in very rapidly, and those wishing to procure them may still do so by applying AT ONCE. These beans are to be planted ONE BEAN IN A HILL. ☞*Write for information. Send for circulars* containing directions for planting and *Recommendations.* m1-4t

DEDERICK'S HAY PRESSES are sent anywhere on trial to operate against all other Presses, the customer keeping the one that suits best. No one has ever dared show up any other Press, as Dederick's Press is known to be beyond competition, and will bale at less expense with twice the rapidity and load more in a car than any other. The only way inferior machines can be sold is to deceive the inexperienced by ridiculously false statements, and thus sell without sight or seeing, and swindle the purchaser. Working any other Press alongside of Dederick's always sells the purchaser a Dederick Press, and all know it too well to show up. Address for circular and location of Western and Southern storehouses and Agents.

P. K. DEDERICK & CO., Albany, N. Y.

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Early Crown Field Peas, clean, no bugs, *Canada Grown,* early, grow a large strong vine that will support itself, only $1 50 per bushel. French Sugar and Mangel Wurtzel Beet, Turnip and Ruta Baga, English and French seed, best produced in the world.

GEO. W. HILL,

80 Woodbridge St., Detroit. Mich

CHILLED PLOWS. Unequaled for good work, light draft, perfect scouring, and economy in use. Best Jointer and Best Wheel made. Call on our agents, or address THREE RIVERS PLOW CO., Three Rivers, Mich.

"Over THE GARDEN WALL" and 100 other Choice Songs and Ballads words and music for 16c. PATTEN & Co., 47 Barclay st, NY

$72 A WEEK, $12 a day at home easily made. Costly Outfit free. Address TRUE & Co., Augusta, Me.

CLOSING OUT SALE

— OF THE —

CHAMPION HERD OF KENTUCKY.

At Harristown, Ill.,

On June 7th, 1883,

In order to close up the partnership between Thomas & Smith, they will sell at the above time and place, their

ENTIRE HERD OF SHORTHORNS

(excepting a few animals not in condition).

Forty Head of the Best Young Marys that ever came under the hammer.

Fifteen Head of Renick Rose of Sharons, Wild Eyes, London Duchesses, and Young Phyllises.

For Five Years in Succession our herd has

WON MORE PRIZES

than all the other herds in Kentucky combined. Catalogues now ready, and can be had on application to

PICKERELL, THOMAS & SMITH, Harristown, Illinois.

Attention is called to Speare & Goff's sale at Springfield, Ill., on June 5th, 1883, and Prather & Smith's at same place, June 6th, 1883. m15-3t

Central Illinois Series of

SHORTHORN SALES

J. H. SPEARS, of Tullula, Ill., and **E. M. GOFF,** of Sweetwater, Ill., will sell at Springfield Fair Grounds, on

Tuesday, June 5, 1883.

S E PRATHER, of Springfield, Ill., and **D W SMITH,** of Bates, Ill., will sell at Springfield Fair Grounds, on

Wednesday, June 6, 1883.

PICKRELL, THOMAS & SMITH, of Harristown, Ill., will sell at the farm of J. H. Pickerell, adjoining Harristown Station, on the Wabash, St. Louis and Pacific R. R., 31 miles east of Springfield, Ill., on

Thursday, June 7, 1883.

The catalogues of the three sales embrace **177 cows and 67 bulls,** of splendid individuals of such families as Rose of Sharons, Young Mary, Young Phyllis, Princess, Wild Eyes, Loudon Duchess, Red and White Rose, etc., etc.

For catalogues, or any particulars address the parties as above.

m22-2 *J. W. & C. C. JUDY. Auctioneers.*

PUBLIC SALE OF

SHORTHORN CATTLE

At Central Michigan Fair, Lansing, on

Thursday, May 31, at 10 o'clock, a.m.

The following animals are to be sold; some of them are descendants of the 23d Duke of Airdrie, owned by Avery & Murphy so long:

1. Cow, Fadette, Vol. 16; calved May 1st, 1869. Got by Arnold, 25550; dam Fredrica, by Duke Balder, 13860; grand dam, Strawberry 2d, by Marquis 687; g. g. dam, Im. Strawberry, by Wiseman 12317.
2. Cow, Fadette 3d, Vol. 16; calved April 1st, 1876. Got by Helmer 26802; dam, Fadette, by Arnold 25550; grand dam, Fredrica, by Duke Balder 13 0, tracing to Im. Strawberry.
3. Cow, Lucinda, Vol. 22; calved Nov. 10, 1880. Got by Airdrie Gwynne, 25512; dam, Fadette 3d, by Helmer 26802; grand dam, Fadette, by Arnold 25550; Fredrica by Duke Balder 13960.
4. Heifer, Mary, by Duke of Bonhuer 38308; dam, Lucinda, by Airdrie Gwynne, 25512.
5. Bull, Pilot, calved Dec. 20, 1882, by Airdrie Gwynne 25512; dam, Fadette 3d, by Helmer 26802.
6. Bull, Bob Roy, calved Oct. 25, 1882, by Airdrie Gwynne 25512; dam, Fadette, by Arnold; see 1st pedigree.
7. Bull, Eclipse, calved Oct. 20, 1882, by second Duke of Ridgvale, 48049; dam, Lansing Belle, by Airdrie Gwynne 25512.

Eight months' time given on good approved notes, at 7 per cent interest.

R. H. HOLMES, Lansing.

FRANCIS GRAHAM, Auctioneer.

AUCTION SALE

— OF —

SHORTHORN CATTLE

A number of thoroughbred Shorthorns, the property of Mr. Richard Hawley, will be offered at public sale on the Fair Grounds of the Central Michigan Agricultural Society at Lansing, on

Thursday, May 31st,

at 10 o'clock A. M., during the Spring Fair. Catalogues of the stock will be sent on application, or can be had on the grounds the day of sale. Apply to B. B. Baker, Secretary, Lansing, or

FRANCIS GRAHAM, Auctioneer,

m15-3t 88 Griswold St., Detroit.

MAST, FOOS & CO.

SPRINGFIELD, O.

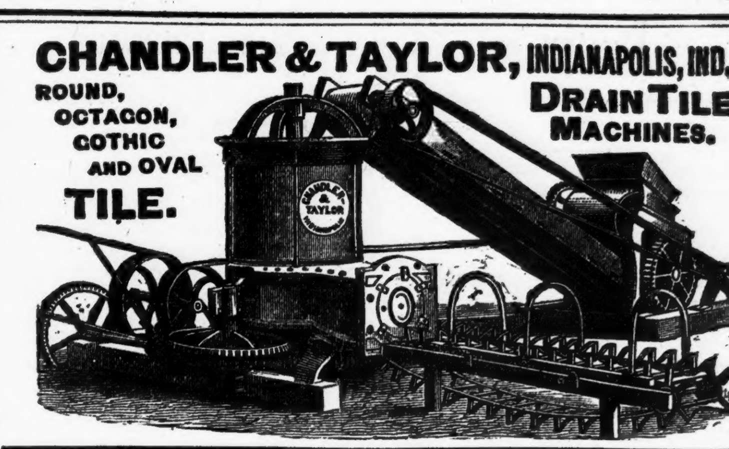
MANUFACTURERS OF THE

FOR SALE.

Imported Pampshire and Southdown Yearling Rams, and Berkshire Pigs of approved breeding for sale. Address, McGREGOR & PHILLIPS, Alta Vista Breeding Farm, St. Clair, Mich. mr27-tf.

CHANDLER & TAYLOR, INDIANAPOLIS, IND.

ROUND, OCTAGON, GOTHIC AND OVAL TILE. DRAIN TILE MACHINES.



STRATTON'S

Late Improved Vegetable

DRY HOP YEAST

J. B. STRATTON was the discoverer of Dry Hop Yeast.

Our "STRATTON'S BRAND" is made by him, under his original discovery, with such improvements as an experience of nearly 20 years has enabled him to make.

Warranted to give perfect satisfaction. Is superior to all other brands.

For sale by all Grocers. Manufactured by **UNION YEAST CO.,**

my22- **Detroit, Mich.**

KEYSTONE SCALE.

Weighs from ¼ ounce to 240 lbs. Price only $4.50. 4-ton Forsythe Wagon Scale, $60. Scales of every description at low prices. L. PATTERSON & Co, 14 and 16 North Canal Street, Chicago, Ills.

McCallum Wagon Box Rack

They are reliable and cheap. Sold by all dealers and wagon makers.

J. McCALLUM & BRO'S M'F'G CO, 24 West Lake St., Chicago, Ill.

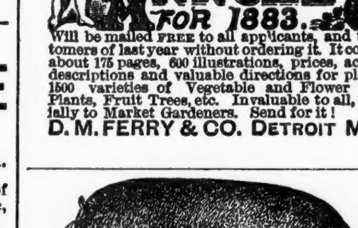
FOR SALE.

Jersey bull, one year old, will be sold cheap. For particulars address GEORGE B. NYE, m22-2t Brighton House, Detroit, Mich.

WANTED—A man with best reference, competent to take charge of 200 acre fruit farm in bearing. The farm is located near Washington, D. C. Farm fully stocked with all improvements. Man to work on salary or shares. Address I. M. LITTLE, Marshall Hall, Charles Co., Maryland.

Will be mailed FREE to all applicants, and to customers of last year without ordering it. It contains about 175 pages, 600 illustrations, prices, accurate descriptions and valuable directions for planting 1500 varieties of Vegetable and Flower Seeds, Plants, Fruit Trees, etc. Invaluable to all, especially to Market Gardeners. Send for it!

D. M. FERRY & CO. DETROIT MICH.



LEVI ARNOLD,

— PROPRIETOR OF —

Riverside Stock Farm,

PLAINWELL, MICH.

— BREEDER AND SHIPPER OF —

Pure-bred Recorded Poland China Swine.

Registered Jersey Cattle.

(A. J. C. C. H. R.,)

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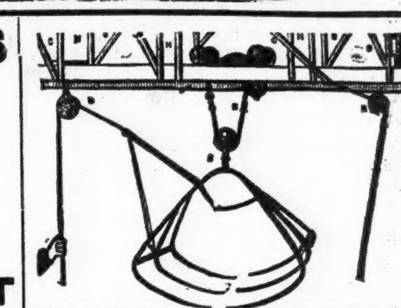

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Poetry.

POEM.

[Read by George Alfred Townsend at the Reunion of the Army of the Potomac, at Washington, D. C., May 16 and 17.]

Civil soldiers, reassembled by the river of your fame,
Ye who saw the Virgin City bathed in Washington's clear name,
Which of all your past commanders doth this day your memory haunt,
Scott, McDowell, Burnside, Hooker, Meade, McClellan, Halleck, Grant?

There is one too little mentioned when your proud reunions come
And the thoughtful love of country dies upon the sounding drum;
Let me call him in your muster, let me wake him in your grief,
Captain by the constitution, Abram Lincoln was your chief.

Ever nearest to his person, ye were his defence and shield
He alone of your commanders died upon the battle field.
All your generals were his children leaning on him, childish-willed,
And they all were filial mourners 'round the mighty tomb he filled.

Tender as the harp of David his soft answers now become
When amid the cares of kingdoms rose and fell some Absalom;
And his humor gilds his memory like a light within a tent,
Or the sunken sun that lingers on the lofty monument.

Like the slave that saw the sunrise with his face toward the west,
As it flashed while yet 'twas hidden on a slender steeple's crest,
So while Victory turned her from him ere the dawn in welcome came,
On his pen emancipation glittered like an altar flame.

Feeling for the doomed deserter, feeling for the drafted sire,
For the empty northern hearthstone and the southern home afire;
Mercy kept him grim as Moloch, all the future babes to free,
And eternal peace to garner for the millions yet to be.

Not a soldier of the classics, he could see through learned pretense,
Master of the greatest science, military common sense.
As he watched your marches, comrades, hither, thither, wayward years
In his map the roads you followed you can trace them by his tears.

In the rear the people clamored, in the front the generals missed;
In his inner councils harbored critic and antagonist.
But he ruled them by an instinct like the queens among the bees,
With a health of soul that honeyed Publicans and Pharisees.

Faint of faith we looked behind us for a chief of higher tone,
While the voice that drowned the trumpets was the echo of our own.
Ever thus, my old companions, genius has us by the hand.
Walking in the tempest with us, every crisis to command.

Like the bugle blown at evening by some homesick son of art,
Lincoln's words unearthly quiver in the universal heart.
Not an echo left of malice, scarce of triumph in the strain,
As when summer thunder murmurs in pathetic showers of rain.

Years forever consecrated here he lived where duties be,
Never crying on the climate or the toil's monotony.
Here his darling boy he buried and the night in vigil wept,
Like his Lord within the garden while his tired disciples slept.

How his call for men went ringing round the world like a bell.
And the races of creation came the proud revolt to quell.
Standing in the last reaction of the rock of human rights,
Worn and mournful grew his features in the flash of battle lights.

Once like Moses on the mountain looked he on the realm he won,
When the slaves in burning Richmond knelt and thought him Washington.
Then an envious bravo snatched him from the theatre of things
To become a saint of nature in the pantheon of kings.

Faded are the golden chevrons, vanished is the pride of war,
Mild in Heaven his moral glory lingers like the morning star,
And the freemen's zone of cotton his white spirit seems to be,
And the insects in the harvest beat his army's reveille.

All around him spoiled or greedy, women vain and honor spent,
Still his faith in human nature lived without discouragement.
For his country which could raise him barefoot to the monarch height,
Could he mock her or his mother, though her name she could not write?

Deep the wells of humble childhood, cool the springs beside the hut,
Millions more as poor as Lincoln see the door he has not shut.
Not till wealth has made its canker every poor white's cabin through,
Shall the great republic wither or the infidel subdue.

Stand around your great commander, lay aside your little fears;
Every Lincoln carries freedom's car along a hundred years.
And when next the call for soldiers rolls along the golden belt,
Look to see a mightier column rise and march, prevail, and melt.

For the Michigan Farmer.

THE DEVIL'S MILLS.

BY MARY E. MILLER.

"Though the mills of God grind slowly,
Yet they grind exceeding small,
Though with patience He stands waiting
With exactness grinds He all."

There are mills about us on every side,
Whose rumble and rush and roar
Is heard o'er city's busy hum,
Or the cataracts angry roar.

By day and by night, the whole year through,
Unceasing in calm or storm,
With horrible gratings and dismal groans,
The greedy wheel turns on.

Into the hopper's yawning mouth,
Are cast by reckless hands,
The hoarded fortunes of many years,
Gold, cottages, palaces, lands;

The glory and strenth of manhood's prime,
Sweet childhood and innocent youth,
The fondest of home ties, the brightest of hopes,
Love, tenderness, honor and truth.

Whatever goes into the ceaseless stream,
Though tossed in with a song and shout,
A mass of ruin, unspeakably sad,
From the grinding mill comes out

How long! O monarchs of our land,
Who boast of your power and might,
Must these legal, licensed, protected mills
Fill our homes with this withering blight?

ALTO, Mich.

Miscellaneous.

AN ALGERIAN LION STORY.

How I came to be sitting, in very good company, one glorious September evening, in the little moonlight garden of the hotel at Algiers is neither here nor there.

My companions about the round table, which was garnished with slim bottles, glasses, and piles of cigarettes, were all Frenchmen—three old Algerian colonists, the fourth an ex-Lieutenant of the navy, who had exchanged a life on the ocean wave for that of a hunter in three-quarters of the globe.

Before dinner I had picked up in the *salon* Du Chaillu's gorilla-book, which I had never seen before, and my saying something about this turned the conversation in the garden upon wild beasts and the hunting of them.

Some wonderful stories were told, especially by the ex-sailor, though not a bit more wonderful than many one hears from Indian sportsmen.

For the matter of that the most extraordinary sporting story I ever heard was told by—of all men in the world—a hare-hunter, who capped therewith a snake and elephant narrative, quite unique of its kind.

Presently a short silence, caused by the uncorking and tasting of a new bottle of Hermitage, was broken by the eldest of the party, who had not said much before. He was a good looking man of fifty, with beard grayer than his head, and a merry twinkle in his eye. What he said I shall repeat, for the sake of clearness, in the first person, just as he told the story himself:

"The adventure of which I am going to tell you, gentlemen, happened to me a good many years ago. It was my first serious interview with a lion. Like most serious things it had a comic side too.

"I was a young man then, and had been some half-dozen years in Constantine, farming in partnership with a friend, an old colonist whose acquaintance I made on board ship coming out from Marseilles.

"Our business was corn and cattle raising, and we did well very together until my partner died of a fever, and after that I took a dislike to the place. I thought I would shift my ground into this province, Algiers, push toward the frontier, and get a grant of government land and make a farm of it. So, getting a neighbor to give an eye to things in my absence, I started on my prospecting expedition.

"I say I, but I should say we, for there were three of us, sworn comrades as ever were.

"First there was your humble servant; secondly there was my horse Marengo, and a better never looked through a bridle. He was bred between a Barb sire and an English mare belonging to the Colonel of chasseurs, of whom I bought him in town when his regiment was going home. He stood about fifteen hands two, carried the Barb head, and the rest of his body was all bone and muscle. His temper was as good as his courage was high; me he would follow about like a dog, but he had one failing, and that was an insuperable objection to the close proximity of anything, except one thing, that stood on four legs. We all have peculiarities, and this was his. Biceps were all very well, but multiply the legs by two, and he let fly immediately, and never missed his aim.

"Such was Marengo.

"Thirdly, there was Cognac, the faithfulest, the most honest, the oddest, and the wickedest little dog the world ever saw. He was more like a terrier than anything else, with a short yellow coat, a fox's head, very long ears, and a very short tail. The shrillness of his bark pierced your ears like a knife, but the awfulness of his howl—he always howled if left alone—baffles description. During the fourteen years I had him he seldom left me day or night. On a journey he would run beside, and when tired get up and sit in my wallet. The great pleasure of his life was to steal behind people and secretly bite their legs.

"By some mysterious affinity he and Marengo were friends from the first. They now sleep under the same tree.

"Well, we started, and after going over a good deal of ground I thought I had decided on a location, and turned my face homeward. My direction was by Alma, to strike the great road that runs under the Atlas eastward into Constantine.

"It was about eight o'clock one morning, when I had been some two hours in the saddle, that I emerged from a narrow valley, or ravine, through which the road ran, on to a sandy plain dotted with bushes and shrubs.

I had just laid the reins on Marengo's neck when suddenly he gave a tremendous shy that pitched me clean off.

"The next minute, with a horrible roar, a lion sprang right at his head.

"I made sure he was on the top of him, and so he would have been, but as Marengo wheeled short round like lightning on his hind legs the streaming reins caught the brute's fore-paw and, as it were tripped him, so that he fell sideways on the road.

"The heavy jerk nearly brought the horse down, but the throat-lash broke, the bridle was pulled over his ears, and recovering himself he darted away among a grove of trees that stood by the wayside.

"So intent was the lion on the horse that he paid no attention to me, lying defenseless before him.

"Crawling swiftly along the ground he pursued Marengo, who I gave up for lost—for his chance against the lithe brute among the trees seemed hopeless.

"However, as luck would have it, there was an open space about a dozen yards across. In the centre of this Marengo took his stand with his tail toward the lion and his head turned sharply back over his shoulder, watching him.

"He stood quite still, except for the slight shifting of his hind feet and lifting of his quarters, which I knew meant mischief.

"The lion probably thought so too, for he kept dodging to try and take his opponent by a flank movement. But the old horse knew his game, and pivoting on his fore legs still brought his stern guns to bear on the enemy.

"Soon with a roar the lion made his spring, but Marengo lashed out both heels together, with such excellent judgment of time and distance that catching him full in the chest, he knocked him all of a heap to the ground, where he lay motionless. Then with a neigh of triumph and a flourish of his heels, away he galloped through the grove out on to the plain and was safe.

"The lion lay so still that I thought he was dead, or at any rate quite *hors du combat*, and was just running to pick up the bridle and follow Marengo, when he sat up on his haunches. This made me stop.

"As he sat there with his head loosely wagging from side to side, and mouth half-open, he looked quite vacant and idiotic.

"Suddenly his head stopped wagging, he pricked his ears, and by the flash of his eye and changed expression, I knew he had seen me.

"Only one thing was to be done, and I did it. The outermost tree was large and low branched. To it I ran and up it I scrambled, and had just perched in a fork about fifteen feet above terra firma, as the lion arrived at the bottom.

"Looking up at me with two red hot coals for eyes, his long nervous tail lashing his sides, every hair on his body turned to wire, and his great paws protruded, he chattered at me as a cat chatters at a bird out of reach. His jaws snapped like a steel trap, and his look was perfectly diabolical. When he was tired of chattering he stood and growled.

"Catching sight of the bridle, he walked to it, smelled it, and then came back and lay down and glared at me.

"My carbine—confound it!—was slung at my saddle. My only weapon, besides my hanger, was a pocket-pistol, double-barreled, and what in those days we called a breech-loader, that is, the barrels unscrewed to load, and then screwed on again.

"It would have been a handy weapon against a man at close quarters, for it threw a good ball—but for a lion! Besides the animal was too far off.

"Then the thought flashed into my mind, where was Cognac?

"I supposed he had run away and hidden somewhere. If the lion got sight of him it would, I knew, be soon all over with poor little fellow.

"All at once there arose, close at hand, an awful and familiar yell. It had a strange, muffled tone, but there was no mistaking Cognac's voice.

"Again it came, resonant, long-drawn, and sepulchral. It seemed to come from inside the tree. Where the deuce was he?

"The lion appeared utterly astonished, and turned his ears so far back to listen that they were almost inside out, when from some hole among the roots of the tree there popped a small yellow head with long ears.

"'Down, down, Cognac!' I cried in my agony; 'go back, Sir!'

"A cry of delight, cut short by a piteous whine, was his reply as he spied me, and, then dashing fully a yard toward the lion, he barked defiantly.

"With a low growl and ruffling mane the beast charged on the little dog.

"Back went Cognac, into his cave as as quick as a rabbit and stormed at him from inside.

"Thrusting his great paw right down the hole, the lion tried to claw him out. Oh, how I trembled for Cognac!

"But he kept up such a ceaseless fire of snapping and snarling that it was plain he was either well round a corner or that the hole was deep enough for his safety.

All, the same, to see the great cowardly beast digging away at my poor little dog like that was more than I could stand. Cocking my pistol, I shouted, and as he looked up I fired at his blood-shot eye. He shook his head, and I gave him the other barrel.

"With a scream of rage he bounded back.

"Cognac immediately shot forth his head, and insulted him with jeering barks.

"But he was not to be drawn again, and after a bit he lay down further off and pretended to go to sleep. Cognac barked at him till he was tired, and then retired into his castle.

"Reloading, I found I had only three bullets left, and concluded to reserve them for a crisis.

"It was now past noon. To beguile the time I smoked a pipe or two, sang a song, and cut my name, Cognac's, and Marengo's on the tree, leaving a space for the lion's, which I determined should be Wellington.

"I wished he would go away.

"Having some milk in my bottle I took a drink, and should have liked to have given some to Cognac.

"The lion began to pant, with his red, thorny tongue hanging a foot out of his mouth. He was as mangy and disreputable brute as ever I saw.

"By and by he got up and snuffed the air all round him, and then, without as much as looking at me, walked off and went deliberately down the road.

"Slipping to the ground I caught up Cognac, who had crept out directly, and, after looking carefully round for the lion was smothering me with caresses. The lion was turning toward a bushy clump in a hollow about two hundred yards off. The light green foliage—willows, water! Had the cunning brute sniffed it out?

"Anyhow, it was a relief to stretch one's legs after sitting six mortal hours on a branch. The lion disappeared round the bushes. I strained my eyes over the plain, but could see nothing moving. Then I gave Cognac a drink of milk and a few bits of bread-cake, for which he was very grateful, Of course, it was no use beginning a race against a lion with only two hundred yards' start in any number of miles. The tree was better than that.

"All the same, he was good a long time; perhaps he was really gone for good. Bah! there came his ugly head round the corner again, making straight for us.

"When he was pretty near I kissed Cognac and threw a bit more cake into the hole. Then I climbed again to my perch. Cognac retired growling into his fortress, and the beast of a lion mounted guard over us as before.

"He looked quite cool and comfortable and had evidently had a good drink.

"Another hour and he was still there.

"While I was wondering how long he really meant to stay, and if I was destined to spend all night on a bough like a monkey, and on very short commons, he got up, and walking quietly to the foot of the tree, without uttering a sound, sprang up at me with all his might.

"He was quite a yard short, but I was so startled that I nearly lost my balance.

"His coup having failed, he laid down right under the branch I was on, couching his head on his paws as if to hide his mortification.

"Suddenly the thought came into my mind: Why not make a devil and drop it on his back? I dismissed it as ridiculous, but it came again. As we have all, including our English friend here, been boys, you know what I mean—not a fallen angel, but the gunpowder devil.

"Good! Well, it seemed feasible—I would try it.

"I had plenty of powder in my little flask, so pouring some into my hand, I moistened it well with spittle and kneaded away until it came out a tiny Vesuvius of black paste. Then I formed the little crater, which I filled with a few grains of dry powder, and set it carefully on the branch.

"My hands shook with excitement; I could hardly hold the flint and steel, but I struck and struck—the tinder ignited—now Vesuvius!

"Whiff, wizz! The lion looked up directly, but I dropped it plumb on the back of his neck. For an instant he did not seem to know what had happened; then with an angry growl up he jumped and tore savagely at the big fiery flea on his back, which sent a shower of sparks into his mouth and nose.

"Again and again he tried, and then raved wildly about, using the most horrible leonine language, and no wonder, for the devil had worked well down among his greasy hair, and must have stung him like a hundred hornets. His back hair and mane burst into a flame, and he shrieked with rage and terror.

"Then he went stark staring mad, clapped his tail between his legs, laid back his ears, and rushed out of the grove at twenty miles an hour, and disappeared up the ravine.

"Almost as mad as the lion with joy, and feeling sure he was gone for good, I tumbled down the tree and ran off along the road as hard as I could, with Cognac barking at my heels. By and by I had to pull up, for the sun was still very hot, but I walked as fast as I could, looking out all the time for Marengo, who would not, I knew, go very far from his master. Presently I spied him in a hollow. A whistle, and, whinnying with delight, he trotted up and laid his head on my shoulder.

"In my hurry I had forgotten the bridle, but with my belt and handkerchief I extemporized a halter, tied one end round his nose, and, catching up Cognac, mounted and galloped off, defying all the lions in Africa to catch me.

"There were still two hours before sunset to reach the next village, and by hard riding I did it. That we all three of us enjoyed our suppers goes without saying. And that, gentlemen, is my story."

We agreed it was wonderful.—*All the Year Round.*

Columbus's Love Story.

According to the ideas of his time Columbus was a religious man. He diligently frequented a conventual church of the city, but though his first attendance there may have been prompted by disinterested devotion, there were other reasons for the increased assiduity with which he continued them. There was, connected with the convent, a girls' school for the daughters of well-to-do citizens, and the pupils were in the habit of regularly hearing mass in the church. One of them—would that we could recall her features long moldered into dust—attracted the admiration and love of the weary mariner. There must have been a considerable dis proportion in their ages, for he was no longer young, but he was convinced he had met his fate, and the inquiries he made confirmed his ardor. She was the daughter of a distinguished sailor, Bartolomeo Palestrello, who had been Governor of Porto Santo. Her father had died without leaving behind him any fortune; but her mother still survived, and must have possessed means of her own. Columbus was accepted as a suitor, and, what to young men in these times must seem a very extraordinary mode of procedure, after his marriage he and his wife took up their abode with his mother-in-law. We would give a good deal to know more of that love story; how it was, for instance, that the castaway adventurer, reduced to earn his living by drawing charts, managed to so ingratiate himself with the mother, whose husband's position might have enabled her to look higher for her daughter. He must surely have been not only a devoted lover, but a man of a good deal of tact, with great power of adapting himself to circumstances. At any rate the union proved a happy one. We fancy that the suitor must have won the mother's heart by the interest he showed in her deceased husband's achievements; for after the marriage most of the household conversation turned upon this subject, and Columbus heard what fired his soul with emulation. Palestrello had been a man of much enterprise, and he had left papers and maps which proved to be of more service to his son-in-law than any earthly inheritance. —*Good Words.*

THE CHEST OF DRAWERS.

"Married," said Mrs. Bubble—"married! And without either wedding-cake or new bonnet, nor so much as a neighbor called in to witness the ceremony. And to Abel Jones,—he is as poor as poverty itself. Mary, I never could have believed it of you."

Pretty Mary Bubble's brown eyes sparkled, half with exultation, half with vague fear.

"It was out in 'Squire Larkins' garden, mother," said she, "'Squire Larkins was there, and Miss Wynwood, and Mr. Hall. Abel was shingling the ice house roof, and he said it must be now or never, because he couldn't endure the suspense. And the 'squire is a justice of the peace, and I've got a certificate, all legal and right—see, mother! And as for being poor, why Abel has his trade, and no one can deny that he is an industrious, temperate young man; and please, mother" flinging both arms around the old lady's neck, "if you forgive me for disobeying you this once, I never will do it again."

So Mrs. Bubble—although to use her own words she never could get over the mortification of having a daughter married by a justice of the peace—finally forgave bright eyed Mary and consented that Abel Jones should set up his shop at the foot of the lane, there to commence the conflict of life.

"Though I'm quite sure," said Mrs. Bubble, "that he will never earn his living; I did hope, Mary, you would have married some one who could at least have cleared the mortgage off the old place."

But Abel and Mary were happy. Where Youth and Love are sitting in Life's sunshine, old Crœsus is one too many. Let him go his way; who cares for him?

"We shall get along," said Abel.

"Of course we shall get along," said Mary.

And thus matters stood when Mrs. 'Squire Larkins, with a young friend in flounced white muslin, stopped at the Bubble house, to drink a glass of milk and eat some of Mrs. Bubble's cherry short cake.

"I hope the bride is well," said Mrs. Larkins, laughing.

"Tollable, thank you, said Mrs. Bubble. "She's gone up to Deacon Faraday's to get their receipt for making soft soap. Abel's well, too, thankee. He's in the shop now, at work. His hammer is sort o'company for me, when I set here alone. I don't deny as he's a decent young man enough, if he wasn't as poor as Job's turkey. And with Mary's face, and her term at boarding-school, she'd ought to done better."

"What a beautiful old chest of drawers," cried Miss Wynwood, ecstatically. "What lovely brass ornaments! And what picturesque claw legs!"

"Oh yes," said Mrs. Larkins. "It is over a hundred years old. Everbody has heard of Mrs. Bubble's antique chest of drawers."

"Oh, ma'am, it ain't the same," said Mrs. Bubble. "It ain't the same at all, I sold the old one a month ago."

"Sold it," echoed Mrs. 'Squire Larkins.

"I didn't want to sell it," said Mrs. Bubble, looking imploringly over the edge of her spectacle glasses. "It wus given to me, you know, ma'am, when my father's estate was settled up and the old furniture was divided. My brother John's wife, she wanted "The Death of Jonathan,' in a gilt frame, with cord and tassels; so she says, says she: 'Sophia, you can take the old chest of draws.'

"And I knew I was being cheated then; but, la, what's the use of trouble among one's relations? So says I:

"'Have it your own way, Abigail Ann.'

"And she took home 'The death of Jonathan,' and I took the chest of drawers. And Abel he fixed it up dreadful nice with a little sand-paper and varnish, and it was handy to keep old letters and samples of patchwork and paper patterns in. But when the fine young lady from the city as is boarding at Doctor Holloway's offered me twenty dollars for it, it seemed a wicked sin to refuse so much money, so I sold it. And John's wife, she couldn't hardly believe her ears when she heard tell of it. And she says, says she:

"'Sophia, don't you suppose you could sell 'The Death of Jonathan' for the same money.

"And I knew just how she felt, and I was not a bit sorry for her, for she was always a grasping thing. But after it had gone away in Doctor Holloway's wagon I began to miss it, and I fairly sat down and cried. And Abel, he says:

"'Cheer up, mother,' says he, 'I'll make you another just like it.'

"And so he did. And there it is," added Mrs. Bubble with honest pride, "and you'll never know but it was the same old chest of drawers. He's darkened it down, 'iled it up, and turned out claw legs, and beat out a set of old brasses to cover the key holes, until you never would know the difference. And I'm just as well satisfied as I was before."

So Mrs. Bubble put on her things and went to the sewing circle, when Mrs. Larkins and Miss Wynwood were gone, so that there was no one in the big, airy kitchen when Professor Eldred and his two daughters—maiden ladies of an unchronicled age—alighted from their open box-wagon and stepped in for a drink of water.

There was the well, under the bowery, apple-blossoms at the back; and there was the gourd-shell lying in the grass beside the sweep; and the cleanly-scrubbed kitchen floor, with its rag rugs at the doors; and the ancient clock ticking away in its corner, and the old chest of drawers between the two windows.

"Pa," said Miss Etheldreda Eldred, putting up her eye-glasses, "what a lovely piece of workmanship!"

"Qnite mediæval," sighed Ermengrade.

"We must have this old revolutionary relic in our drawing room, pa."

The professor stared around him.

"There's nobody to ask the price of, my dear," said he.

"That's just like pa," said Etheldreda. "Don't you hear somebody hammering somewhere? There's a carpenter shop just down the lane. Go and inquire—do!"

Able Jones was working diligently away at a step-ladder, when the professor's bald head was thrust into his shop.

"Eh," said Abel, looking very hand some in his shirt sleeves and scarlet neck-tie.

"I wish you good morning, sir," said the professor politely.

"Same to you, sir," said Abel.

"I wish" said the professor, "to inquire the price of that beatiful old brass-mounted chest of drawers in the kitchen of the house yonder. My daughter—"

"No price at all, sir," said Abel. "It ain't for sale."

"If a liberal remuneration, sir, would be any inducement to you—

"Not for sale," good humoredly repeated Abel. "Nothing would induce my mother-in-law to part with it."

"An old family relic, eh," remarked the professor.

"Exactly," said Abel.

And he went on hammering and whistling the tune of "Robin Adair," while the professor made his way back throught the prickly hedge of gooseberry bushes and black currants.

Half an hour afterwards Mary, the first pretty cause of all Abel Jones' romantic adventures, ran into the shop. They had been married three months now, but Abel's smile of welcome was no less bright than it had been in the days of the honeymoon.

"Bless me, Polly," said he. "What is the matter? You look half scared to death!"

"And no wonder," said Mary. "There have been burglars in the house. Mother's chest of drawers is gone."

"What!" shouted Abel.

"And these were left under one of the volumes of 'Barnes' Notes on the Gospel,' on the kitchen table!" breathlessly added Mary, displaying five ten dollar bills in the palm of her hand.

"Upon my word!" said Abel, "it's the old fellow with the bald head, Polly, and the spectacles, you may depend upon it. I thought he looked like a furniture dealer."

Alas, poor Abel! not to be able to discriminate between a second hand store keeper and the professor of æsthetics and belles-letters in Bigley University. But such is life.

"But it's stealing," cried Mary, breathlessly.

"Well, not exactly," said Abel, laughing. "The old thing in itself wasn't worth ten dollars. If they choose to value it at fifty, why, it ain't bad for us in the light of a pecuniary transaction, eh, Polly?"

"But what will mother say," pleaded Mary.

"I've got another nearly finished," said Abel. "I was meaning to sell it to Mrs. Harrington, but I'll just set it up in the old place, and mother will never care whether it's number one or two that is there."

So that when Mrs. Bubble came home from the sewing circle, Abel was just setting up a new chest of drawers, and Mary eagerly related to her the tale of the burglary, for so she persisted in calling it.

"Well, I never!" said Mrs. Bubble "fifty and twenty-five makes me seventy five. I'm glad I didn't take 'The Death of Jonathan.'"

"This means business," said Abel to himself.

And he set to work to manufacture still other duplicates of the "chest o' draws," staining them a dark, rich brown, and beating out odd, shell-shaped decorations to complete the illusion. And when the curiosity-hunters came up the solitary road, embowered in elm, where it required considerable engineering for one load of hay to pass another, Abel sat whistling on his door-step ready to drive a bargain.

"Any old furniture or antiques to sell?" the hunter would blandly inquire.

"Not a stick," said Abel, and then after a minute's bland silence on the part of the pioneers of the æsthetic he would add, "Unless you'd like to look at this ere chest o' draw's I've just tinkered up. I can't say up and down, you know, as it's old; but there it is. You can look for yourselves. There ain't no date on it. I don't care whether I sell or not. Nor yet I don't put no price on it. I ain't none of your bargain-drivers. If you like it, pay what you think is right; if you don't, why, there ain't no harm done."

So that no less than seven editions of the chest and drawers were sold before the season was over. They became the fashion. Every person who bought one had a vague hope of having something a little different from his neighbors. And some of them have never ceased looking for hidden treasures, old papers, outlawed wills among the pigeon holes and compartments.

And when the season ended, and the city boarders went back to their brick and mortar wilderness, Abel brought his mother-in-law a plethoric pocket-book.

"Three hundred and sixty-five dollars, mother," said he. "Enough to pay off the last installment of the mortgage on the farm. We couldn't have made more money than that if we'd kept a houseful of boarders, as Polly wanted to do. But I don't mean Polly to be at the beck and call of a dozen fine ladies and, work her roses off, while I am able to work for her."

And the report of Abel Jones' good luck spread far and wide through all the country-side. Mrs. Hopper, the "Abigail Ann" of Mrs. Bubble's legendary reminiscences, heard the great news and drove down from Plum hill to inquire into it.

"If it's true as you've found five hundred dollars," said she, dolefully, "in that old chist o' draw's, it's the law as the heirs should divide equally, Sophia Bubble."

"But it ain't true," said Mrs. Bubble. "Oh," said Mrs. Hopper, "I told my husband as it was all a made-up story."

"Not that exactly, neither," said Mrs. Bubble, laughing.

And then she related the precise circumstances of the case.

Mrs. Hopper drew a long breath.

"I wish I hadn't chose 'The Death of Jonathan,'" said she. "The cord broke last week and it fell down and smashed my best set of china. I never had no luck with it."

"And served you right for your greed and rapacity," said Abel Jones, sotto voce to Mary, who in the next room was helping him varnish a set of hanging shelves.

"Hush-sh-sh," whispered Mary.

While old Mrs. Bubble smiled and remarked, sagely, that "nobody never knew exactly how things was going to turn out. But," she added, wiping her spectacle glasses, "that chist o' draws' certainly did bring me good luck. It's paid off the last of the old mortgage and laid in a stock o' real black-walnut for Abel to work with, and a navy-blue cashmere for Mary. And if that ain't luck I don't know what is."

Government Profit on Coinage.

Some curious facts relating to unredeemed obligations of the Government have been collated by the New York *Sun*, which show a considerable source of profit to the United States Government. The amount of paper money and coin which is never presented for redemption comprises a large sum. Much of this is destroyed by fire. Some of it is buried or hid in places known to no person alive. A large quantity of the coin is melted to make sterling silverware. Considerable amounts of both paper money and coin are exported never to return. Not long ago a United States bond, issued about 1819, was presented at the Sub-Treasury in this city. The interest on it had ceased over fifty years. If had come back from Europe through Baring Brothers. The outstanding principal of the public debt of the United States last year was nearly two billion of dollars, chiefly represented by bonds and treasury notes.

It would be, of course, impossible to say how much of this will never be presented for redemption, but some idea may be formed from the fact that $57,665 of it was issued so long ago that the date is not recorded. It appears in the report as "old debt" that may safely be put down as profit. There is an item of $82,525 of treasury notes issued prior to 1846. Some of them were issued fifty years ago, and will not, in all probability, ever be presented for redemption. One thousand one hundred and four dollars of the Mexican indemnity of 1846 has never been claimed. The last of the fractional currency was issued under the act of June 6, 1864, yet, although nearly twenty years have elapsed, $7,077,247 has not been presented for redemption. Some of this is held as a curiosity. Some of it is still used by banks and merchants for transmitting small sums by mail. Several New York banks have considerable sums of new fractional currency, which they distribute for the accomodation of their customers.

As to the coin, the Government derives a considerable profit from it. The silver in one thousand silver dollars costs, on an average, about $803.75. The coinage of a silver dollar costs about 1¼ cents. The total cost of one thousand silver dollars to the Government is therefore $816.25. Since the organization of the mint, in 1793, 127,190,618 silver dollars have been coined, on which the Government has received a profit of over twenty-three millions of dollars.

In the same period $122,758,510 was coined into half dollars. At the same rate of cost for coinage the Government profited $19,395,769 on these. The total silver coinage of the Government since 1793 is $357,766,792. Estimating the profit on the halves, quarters, and subsidiary coins at the same rate as on the dollar, the total profit received by the Government on its silver coinage has been about sixty-four millions of dollars.

In the coinage of the five cent nickels the Government reserved to itself the liberal profit of nearly 50 per cent. This gave to the Government last year the handsome revenue of over $100,000 from nickels alone. The wide margin between the intrinsic value of the five cent nickel and its face value led to extreme counterfeiting. Several years ago an assay was made of some of the counterfeit nickels, and it was discovered that the counterfeiters had put into their coins more valuable metal than the Government uses in making the genuine coins.

Something to be Learned.

Commenting on a recent burning casualty in Philadelphia, by which a young lady lost her life, the *Public Ledger* makes these pertinent observations:

"The first thing to teach a girl in this matter is that a fire makes headway more rapidly in burning clothes when the endangered person is standing up. The difference in progress between a burning lamplighter of twisted paper, held in the hand perpendicularly, flame down, and in the same paper laid flat on a marble hearth, can be seen in a moment. The first thing to do when clothing catches fire is to lie flat and cover up the flames, if there is nothing within reach to smother it. If, as it is probable, there was a bed in the room where Miss Manship was standing, getting into bed, between the blankets, and rolling up in them, would have been a sure way of putting out the fire in a burning skirt or sleeve. The worst, the very worst thing to do was to run down stairs. Opening the door made one draught, the flight down stairs another, and rushing out into the street, in the last frenzied moment, the worst of all. The impulse to get out of doors is very strange in all such cases, because within the house there are always means for putting out a fire and outside there are none. Rugs, rag carpet, torn off the kitchen floor, a heavy overcoat, blankets from the beds, even pieces of bedside carpet, put round the person in the twinkling of an eye, while water pails and pitchers are there to hand, ready to be emptied. In every case let the person whose clothes or hair has caught fire throw herself flat on the floor and roll upon the flame. If there is anything in the room of thick woolen or carpets to smother it, even a gossamer waterproof cloak, snatch these and smother the fire while calling for help. If the fire has caught the hair, bury the head in bed clothes. Fire cannot burn without air, and by shutting out all air from the flames they must go out. But an open door fans the flames, and a standing position gives them headway. Girls are much more liable, from their long flowing hair, their cotton aprons, and, altogether, thinner and more loosely bouffant dress, to be set on fire than boys, whose stout cloth jackets are not easily ignited. The rules for putting out fire in burning clothing may not be taught in the Normal school, but every teacher ought to know them, and so thoroughly that even the fright of mounting flames will not drive them out of mind."

THE JAPANESE FAN.

Others may sing of the budding trees,
The greening grass and the balmy breeze,
Of the robin's song, and the other things
We have learned to expect with recurring springs;
Others may sing of them—those who can—
I sing the song of the Japanese fan.

Of the Japanese fan, with its wild, weird birds;
Its strange and peculiar flocks and herds;
Its sunsets and thunder-clouds—gloomy foreboders
Of storms that are coming; its peaked pagodas;
Its flowers of a species quite unknown to man,
But which flourish and thrive on a Japanese fan.

Then there are the women, those curious creatures
With their fortified heads and their queer bias features;
And there is the bird lightly poised on a twig,
The twig very little, the bird very big;
And those intricate tangles, without form or plan,
That gleam from the sides of a Japanese fan.

In the background we often see Mount Fusiyama
As sacred an object as Thibet's Grand Lama;
The shrubs and the bushes most likely are tea,
But the cross-legged gentlemen—who can they be,
Vacantly gazing as hard as they can,
While sitting around on a Japanese fan.

Perhaps they are gods—they have rather that air;
Perhaps 'tis a rule of art over there,
Which no one dare break lest he be undone,
That the gods cross their legs and the storks stand on one,
For thus, since their importation began,
They have always appeared on a Japanese fan.

Whatever they're meant for, I bless one and all,
As I pin them around over spots on the wall,
As I carelessly stick them in jars and in bowls,
And cover adroitly the black stove-pipe holes;
No matter how bare be the desert, I can
Make it bloom like the rose with the Japanese fan.

O Japanese fan, if you only had feet,
I'd lay down before them a rich tribute meet
In praise of your beauty and use, and the grace
With which you can cover an unsightly place;
And believe me, I'll sing as loud as I can,
Long may you wave, O Japanese fan!

—*Bessie Chandler, in Harper's Bazar.*

The Sorrows of Women.

Upon the whole, it is a dreadful bother to be a woman, and do the thing up in good shape.

In the first place, you've got to look well, or else you're nobody. A man may be homely, and still be popular. Whiskers cover up the most of his face, and, if he has wrinkles on his forehead, they may speak of his cares and thoughtful disposition, and tell each other that his wrinkles are lines of thought. Lines of thought, indeed! when in all probability, his forehead is wrinkled by the habit he has got of scowling at his wife when the coffee isn't strong enough.

A woman must always be in good order. Her hair must be frizzled and banged as fashion demands, and she must powder if she has a shining skin, and she must manage to look sweet, no matter how sour she feels, and she must hang just so, and her laces must always be spotless, and her boot buttons all in place, and finger-nails clean, and she mustn't whistle, nor climb fences, nor stone cats, nor swear when she's mad.

She can't go out alone, because ladies must be protected. She can't go anywhere when it rains, because her hair won't stay crimped, and she'll get mud on her petticoats and things. She can't be a Freemason, because she would tell their secrets, and everybody would know all about the goat and gridiron. She can't smoke, because it wouldn't be feminine. She can't go courting, because it is unwomanly. But she must get married before she is twenty-five, or everybody will feel wronged. People will sigh over her and wonder why it is that men "don't seem to take," and all the old maids and widows will smile significantly.

It is a terrible thing to be an old maid—terrible! Everybody knows it is, and the women who are married to drunken husbands, and who quarrel six days out of seven, will groan in agony over the single woman, and call her "that poor old maid!"

A woman must marry rich, or she doesn't marry "well," To marry well is the end and aim of a woman's existence, judging from the view which people in general take of this matter.

It is everybody's business whom a woman marries. The whole neighborhood put their heads together and talk over the pros and cons, and decide whether she is good enough for him, and they criticise the shade of her hair, and relate anecdotes of how lazy her grandfather was, and how her Aunt Sall used to sell beans and buttermilk.

A woman must wear No. 2 boots on No. 3 feet, and she must dress well on seventy-five cents a week; and she musn't be vain, and she must be kind to the poor, and go regularly to the sewing society, and slave in church fairs.

She must be a good cook and she must be able to "do up" her husband's shirts so that the heathen Chinee washerman would groan with envy and gnash his teeth with unholy passion at the sight of him.

She must always have the masculine buttons in the family sewed on so that they never will come off while in use, and she must keep the family hosiery so that nobody would mistrust that there were toes inside the stockings when they are on.

The Story of a Dakota Belle.

A good illustration of a young woman's shrewdness, the good fortune that comes to help those that help themselves, and the unwholesome "craze" of the newspapers of the day to make every active, sensible girl out a heroine, is found in the plain statement of facts as to the story of "Belle Clinton, the Dakota Pioneer Girl." A wonderful story of self-sacrifice and courage is told by a Chicago paper in glowing terms. It is copied into several of our State papers, and finally has been put into the "patent outsides." The facts are these: Belle Clinton's name is Sally Hamilton. Her home is near Marshalltown. She graduated a number of years ago from the college at Ames, and became a school ma'am. After three years of teaching she wearied of it, and as a classmate had married and gone to Dakota with her husband to take up a homestead claim, and had written her enthusiastic letters, urging her to come also, she left her school, and proposed to two young men who were going to "team it" to Dakota that summer, that they should take herself and sister with them. The journey from Marshalltown, Iowa, to Mitchelville, Dakota, undertaken as a sort of a camping-out adventure, is all the rough-ing it that Miss Hamilton ever did. She was met at Mitchelville by her friends and taken right to their home. She decided in a fortnight to take up a homestead claim adjoining theirs. Her friends' house is a few yards from the line that divides the two homesteads. She had a comfortable house of one room built a few yards the other side. She boards and sleeps at her friend's house, and after breakfast she takes her books or sewing over to her room and stays until dinner, and returns after dinner until supper time. The two houses are within easy speaking distance. Her room is very comfortable and prettily furnished, and occasionally a lady friend has spent the night with her "across the fence," but she is never alone. She walks very little, riding with her friends to town, or about her land when she chooses, for pleasure. As for "hardship, isolation, self-sacrifice, manual labor,"—pioneer life—Miss Sally knows nothing about it from experience.

The homestead law requires that six months of every year for five years shall be spent "on the ground." She goes west in May and stays through the golden October days. She spends the summer in a delightful climate, and with an old school friend, reads a great deal, does all her sewing, and comes back to Iowa to spend the winter. When the five years are over she will own as valuable a quarter section as there is near Mitchelville. She is a slight young woman, short in stature, twenty-five years of age, and has a "smart" air about her; but there is no heroic endurance or the impress of thrilling adventure in her face. The result of the Chicago paper's story was that she received over two hundred and twenty-five letters addressed to Belle Clinton, inquiring about Dakota and asking about emigrating. And she has so increased the number of emigrants over a certain Iowa railroad that the general manager has given her a life pass, so that her annual trip costs her nothing for rail fare and accomodations. "Some men have greatness thrust upon them."—*Iowa Register.*

Dyspepsia.

The late Dr. Deared, in his recently published essay on "The Causes and Treatment of Indigestion," lays down as a fundamental principle that the amount of food which each man is capable of digesting with ease always has a limit which bears relation to his age, constitution, health and habits, and that indigestion is a consequence of exceeding this limit. Different kinds of food are also differently adapted to different constitutions. Dyspepsia may be brought on by eating irregularly, by allowing too long an interval between meals, and by eating too often. Frequently the meals are not gauged as to their relative amount, or distributed with a due regard to health. Thus, when we go out after taking a light breakfast and keep at our work, with a lighter lunch only during the interval, till evening, we are apt, with the solid meal that tempts us to indulgence, to put the stomach to a harder test than it can bear. "When a light breakfast is eaten, a solid meal is requisite in the middle of the day. When the organs are left too long unemployed they secrete an excess of mucus, which greatly interferes with digestion. One meal has a direct influence on the next; and a poor breakfast leaves the stomach over active for dinner. * * * The point to bear in mind is, that not to eat a sufficiency at one meal makes you too hungry for the next; and and that, when you are too hungry, you are apt to overload the stomach, and give the gastric juices more to do than they have the power to perform.

Persons who eat one meal too quickly on another must likewise expect the stomach finally to give notice that it is imposed upon. Other provocatives of dyspepsia are imperfect mastication, smoking and snuff taking, which occasion a waste of saliva, although some people find that smoking assists digestion, if done in moderation, sitting in positions that cramp the stomach, and the pressure that is inflicted on the stomach by the tools of some trades, as of curriers, shoe-makers, and weavers. The general symptoms of dyspepsia are well known. Some that deserve special remark are fancies that the limbs or the hands are distorted, mental depression, extreme nervousness, hypochondria, and other affections of the mind. The cure is to be sought in avoiding the food and habits by which dyspepsia is promoted, and using and practising those which are found to agree best with the system of the subject. Regularity in the hours of meals cannot be too strongly insisted on. "The stomach should not be disappointed when it expects to be replenished. If disappointed, even a diminished amount of food will be taken without appetite, which causes the secretions to injure the stomach, or else impairs its muscular action."

The Diamond Rattlesnake.

Of all the snake varieties of which we have yet any knowledge, the diamond rattlesnake, as it is called, seems to be the most deadly. It grows to a length of six or seven feet, and is somewhat thicker than a man's wrist. It is armed with the whitest and sharpest of fangs nearly an inch in length, with cisterns of liquid poison at their base. A terror to man or beast, he turns aside from no one, although he will not go out of his way to attack any unless pressed by hunger. A description of his movements by a traveler who has encountered him states that he moves quietly along, his gleaming eyes seeming to emit a greenish light, and to shine with as much brilliancy as the jewels of finished coquette. Nothing seems to escape his observation, and on the slightest movement near him he swings into fighting attitude, raising his upper jaw and erecting his fangs, which in a state of repose lie closely packed in the muscles of his mouth. This snake is not so active as the famous copperhead of North, nor so quick to strike, but one blow is almost always fatal. His fangs are so long that they penetrate deep into the muscles and veins of his victim, who has little time for more than a single good-by before closing his eyes forever. In one instance the fangs were found to be seven-eighths of an inch in length, and though not thicker than a common sewing needle they were perforated with a hole through which the greenish-yellow liquid could be forced in considerable quantities, and each of these sacs contained about half a teaspoonful of the most terrible and deadly poison.—*Scientific American.*

The Canadian Pacific has been sued for $50.-000 damages by Capt. C. W. Allen of the department of the interior, Ottawa, for their agents pirating extracts from his land prospectors' manual and field book, and inserting them in the millions of immigrant maps and books published in New York for circulation in Canada and elsewhere.

VARIETIES.

A DISTINGUISHED clergyman in the leading church of a Connecticut city had one morning finished his sermon, when one of his much-impressed hearers came forward to thank him for it, and this dialogue followed:

"It is fifteen years since I heard you last. In this very place, fifteen years ago, I heard you preach a sermon that I have never forgotten. It did me more good than any sermon I ever heard. It stuck by me, and I have always wanted to thank you for it."

"Ah, indeed?" replied the pleased preacher. "Such evidence of my poor labor is very grateful. I should like to know what sermon it was. Do you remember the text?"

"Well, no, I can't remember what the text was now, but it was the greatest sermon I ever heard. It just lifted me. I never forgot that sermon."

"I should really like to know what sermon it was," replied the clergyman, much interested in so decided a case of the power of the pulpit. "If you can not recall the text, what was the subject of the sermon?"

"Well, now, doctor, it's gone from me; I forget what the text was, and I can't rake up the subject now; but I tell you it was a great sermon. It did me more good—it was the most powerful discourse I ever heard. I shan't forget it if I live to be eighty."

"But can't you recall anything in it? You excite my curiosity. Can't you give me a clew that will identify it?"

"No, I can't tell what was in it exactly; the subject has slipped out of my mind. I don't know exactly what you said, but it was a magnificent sermon. It did me more good than all the preaching I ever heard. It has just staid by me for 15 years."

"And you can not recall a word that will help me to identify it?"

"Well, I can't now bring up what it was about, but I remember how it wound up. You said, 'Theology ain't religion—not by a —— sight!'"—*Harper's Magazine.*

THE Norwich *Telegraph* says Court Stenographer Rose tells a good story of the late Judge Balcom. The judge was holding court in Cooperstown. He assigned a young lawyer by the name of George Washington Brooks to defend a prisoner who was without counsel, and who was to be tried for a criminal offense. The lawyer took his client aside, and after consultation, endeavored to have him plead guilty, but the latter begged for a hearing before the "Judge and jury."

The evidence was heard and was conclusive against the prisoner. Mr. Brooks then addressed the jury, speaking two hours, frequently having the jury mopping their tears and when he closed, "the 12 good men and true" acquitted his client without leaving their seats. The dignified Judge, says Rose, rose slowly from his chair, and with his characteristic sternness directed to the clerk to strike out the word "Washington" from the name of "George Washington Brooks," adding that any man who could so successfully lie to a jury wasn't worthy of possessing the name of the father of his country.

NOT long ago, in St. Louis, one of those unfortunate creatures called "mashers" sent to an estimable young German lady a letter to which this postscript was added:

"P. S. That my darling may make no mistake, remember that I will wear a light pair of pants and a dark cut-away coat. In my right hand I will carry a small cane and in my left a cigar. Yours forever. ADOLPHUS."

The father replied courteously, stating that his daughter had given him authority to represent her at the appointed place at the time prescribed. The postcript added was as follows:

"P. S. Dot mine son may make no mishdakes, I vill be dressed in mine shirt sleeves. I vill vear in mine right hand a glub; in mine left hand I vill vear a six shooter, forty-five caliber. You vill recognize me by de vay I bats you on de head a goople dimes dwice mit de glub. Vait for me on de corner, as I have some dings important to inform you mit.

Your Frent,
HEINRICH MULLER."

MR. PETERS has a tailor named Timothy Flynn in his employ. The domestic affairs of Timothy and his wife are not conducted with harmony. Broken heads and disembered articles of furniture frequently attest this fact. Mrs. Flynn usually accompanies Timothy when he goes to the office on Saturday evenings to draw his wages, and as there is a difference of opinion between Mr. and Mrs. Flynn as to which of them has the right to assume the responsibilities of the position of financial agent of the family, the proceedings are often of a tumultuous nature.

Last Monday Timothy did not come to work. On Tuesday Mr. Peters went to his house to see him. He met Mrs Flynn at the door. A black eye, a bruised nose and a triumphant smile were her most prominent features.

"You seem to have been having a divil of a time, Mrs. Flynn," said Mr. Peters; "you are all broken up. Has—"

"Don't talk, Mr. Pethers. Lord love ye, don't talk till ye see Flynn."—*Texas Siftings.*

SOLID SATISFACTION.—Senator Lapham was in Jackson, Mich., recently, and related to his acquaintantances there many reminiscences of his experiences when, 45 years ago, he tramped through that State carrying one end of a surveyor's chain. "The first solid satisfaction I ever got out of Michigan," he said, "came about this way: I was taken sick with bilious fever at Tecumseh, and a doctor whose name I don't remember came to visit me in a little hut where I lay, with bark for a roof, and which leaked terribly during every storm. The fellow poured calomel into me until I was nearly dead. Finally Dr. Spaulding, of Sylvania, came and cured me. Well, the fellow whose name I can't recall, presented a bill of $63 for nine visits. I paid him in money on the wildcat bank of Clinton, and the day after I paid him the bank busted. That's the only real satisfaction I ever experienced in Michigan. and I think of it now with pleasure, for he salivated me terribly."

"Well, you young scapegrace," growled Fulkins' rich old uncle on meeting his nephew the other day, "what are you about now—loafing, as usual, I suppose?"

"Well, no, uncle," said that amiable young reprobate, "I've gone into the stevedore business."

"Have, eh! Well, I'm delighted to find that you are engaged in an honest occupation, however humble. What are your duties?

"Unloading schooners, sir."

"Indeed! Glad to hear it, young man—glad to hear it. Ahem! Here's twenty for you."

"But, great Scott!" said Fulkins to his friends, when the old man walked off, "if he ever finds out that they are schooners of beer he'll cut me in two with a shilling."

A YOUNG man who lately went out West to make his fortune, dropped into a gambling hell and began to play. Luck was in his favor and he won several hundred dollars. The next day he sent the money home to his father and wrote as follows:

DEAR DAD—The West is a glorious country and I am getting rich hand over fist; enclosed find $500. Yours, Etc.

A few days later he wrote again, this time in a slightly altered tone. His brief epistle ran thus:

DEAR FATHER—The West is not such a glorious country as one might suppose. Please send back that money by return mail. I coppered the ace and went broke. My watch will keep me in grub until your remittance can reach me.

A YOUNG lady in Boston had gathered a Sunday school class from among the newsboys of the city. One Sunday she was striving to impress upon their minds some good advice in regard to the future, when it occurred to her that the word was, perhaps, a little beyond the comprehension of the class. Putting the question to the boys, "Do you know what the future means?"

There was a dead silence for a moment which was broken by a bright little fellow, who quietly suggested that it might mean "Further particulars in the next edition."

HERR BRETZEL (who has just had a telephone put up), calls for the repairer the next day:

"Look a-here, my vrent, tidn't you dole me dot dellervone spheak Cherman und gonvers in Cherman?"

Repairer—"Yes, sir."

Herr B.—"Vell, by shimmetty! I dalk Cherman to dot dellervone yesterday mit bolideness, unt by unt py it say, 'Hello, phawt air ye jabberin'? Come off, ye old Dutchy!' I ton'd allow no dellervone to sass me dot vay. Dake id avay!"

ANOTHER case in which a soft answer turned wrath into merriment:

At a certain party a gentleman, in the midst of an angry dispute, threw a bottle at his opponent's head by way of emphasizing his argument. Foote, who was present, immediately picked the missile up and laid it on the table, saying:

"Friends, if you pass the bottle as quickly as that you won't be able to stand out the evening."

"See here, sir," exclaimed a Philadelphia grocer, bristling up with righteous indignation, as the milkman made his morning call. "I should just like you to explain how the chalk and white clay that I found in my coffee cup this morning, got there."

"I don't know, I'm sure," answered the milkman, "unless you sweetened your coffee with the same kind of sugar you sold me yesterday.

Chaff.

When a man can't make anything else he can make remarks.

He spent $70 on his daughter's art tuition, and then she couldn't draw a conclusion.

Very accurate language, the Chinese! A sewing-circle is called in Chinese "chin-chin."

Marriage is a lottery, but we have not heard that love letters are denied the privilege of the mail.

The fragments of the fellow who burst into tears were gathered up by Wall Street speculators and sold for watered stock.

It is said to be impolite to offer a man a mustache cup, but it makes some young men feel greatly encouraged, nevertheless.

A debating society will tackle the question: "Which is the most fun—to see a man thread a needle or a woman try to drive a nail?"

A person does not need to be very observing or travel very far to learn that the great men own all the railroads, and the clerks all the hotels.

"I really was puzzled what to do for the best," said our own Mrs. Ramsbotham. "I was quite 'on the corns of a duenna,' as the saying is."

A St. Louis man saw the painting of the enchanted palace with all the guards fast asleep and ejaculated: "The house is pretty old-fashioned, but the policemen look natural."

"How many races are there?" was asked in a Kentucky school. "Three," yelled the children in chorus, "the spring meeting, mid-summer speeding and fall fairs."

"No," said a New York belle who had just returned from a tour of Europe and Egypt. "No. I didn't go to Red Sea. Red, you know, doesn't agree with my complexion."

We are offering a chromo to any one who will bring to this office a pretty young woman with dimples, who will not chew her under lip, as she goes along the street to make them show.

"I don't say all I think," remarked Brown, when pressed for his opinion of the representative of his district. "I should think you might," replied Fogg, "and not be pressed for time, either."

We haven't seen the first robin yet, but we saw a woman with a croquet mallet chasing a man the other morning, and as the man went over the fence it looked very much like an early spring.

Husband—"I want to tell you some good news. I have just had my life insured. Wife—"Your lie! That's just the way with you selfish men. You would never think of having my life insured."

An old tombstone in the burying-ground at West Lynn, Mass., has this inscription: "God took the good, too good to stay, and left the bad, too bad to take away." Rather hard on the mourners.

"Yes," said the deacon, "the organist certainly did play opera bouffe airs and the can-can in his voluntary yesterday. But dear me, I can't kick up a row about it without giving myself away by showing that I recognized the music."

Two young exquisites were languidly discussing Damocles' predicament, forced to dine beneath the sword suspended by a single hair. "Not that I should have minded the sword, by Jove; it would have been the danger of the hair falling into my plate that would have unmanned me."

"Oh, dear, I am tired out," exclaimed Mrs. Shoppingham; "you can't have parcels sent to the depot without paying, you know, and in an economical fit I have been lugging this all about the city." And with a sigh of relief she took a spool of cotton out of her pocket and deposited it on the table.

Fair Retort.—Mrs. Mountjoy Belassis (after several collisions: "It strikes me, Mr. Ruddeford, you're much more at home in a boat than in a ball-room! Little Bobby Ruddeford, the famous Oxbridge coxswain: "Yes, by Jove! And I'd sooner steer eight men than one woman any day!"

A Chicago paper says that a printer in that city has been cured by prayer. It does not say what the printer has been cured of. If he was cured of extracting a word in a paragraph on which a joke hinges, and substituting a word of his own "to make sense," as he puts it, we will indorse the prayer cure, and give it a five-inch electro ad. free, one year, top column, next to reading matter.

The Household.

UNREST.

A century hence historians will designate the present day as an epoch disturbed by a great human tidal wave; a wave mighty and strong, rushing onward with irresistible force and encircling the globe. Woman's hand first set it in motion, woman's voice mingled with its first low moan, and women's voices now blend in the echo which floats back from the receding shores.

The restless ambition, unsatisfied longings of the few has resulted in opening many broad avenues to women; avenues which are already thronged by the ambitious, the curious and the adventurous. All these, looking at the successes of some gifted sister, covet the crown which rests upon her brow, and determine to follow in her footsteps. Very likely in their very first attempt they will discover almost insurmountable obstacles surrounding them, and at once a wail breaks upon the pulsing atmosphere of life, the burden of which, echoed by thousands of restless souls, is "drudgery." Nature has decreed that all her boundaries shall be circles, and the horizon of every life is the same in form but differing in dimensions, according as one gets farther and farther from the centre—self. There are no fixed limits, for what may seem permanent to-day is but the markings of one of the degrees which may widen or diminish to-morrow, as the mood seizes us. Oh, these moods! how they throttle us! how they bend and control us!

Each individual is the centre around which his little world revolves, the light which is radiating a silent influence all around it in a greater or lesser degree, according to its individual capacity. Just here we strike the key note of all this wailing discord, unrest. We live in a land which proclaims all men born free and equal, are reared in an atmosphere which is impregnated with the sentiment, "I am as good as my neighbor." This oft repeated sentiment has blinded us to the important fact that in order to perfect the great plan of the Creator it is essential that His creatures shall possess different capacities bounded by differing horizons. "Yes, but my boundaries are so narrow," exclaims some discontented sister. And why, let me ask. The capacities of the soul are limitless as space, and its boundaries marked by its power. The key to every man is thought, and thought measures the circle bounding his life. This being true, does it not rest with us to mark out and fix our own horizon? Must this horizon be the same day after day? Because I am engaged the greater part of my time in domestic duties does it necessarily follow that I am a drudge?

The object of life is soul-growth, and it, like the body, grows by what it feeds upon. If, therefore, I dwell upon the fact that my outward life to-day is the same as yesterday; that I have not the wealth and leisure which another, not more deserving, has; that I toil incessantly for others who dimly realize or perhaps do not understand at all the sacrifice I am making, am I not by so doing confining my poor soul in the narrowest boundaries of self, and forgetting that though lacking worldly favors, my efforts are not unnoticed, and that the faithful performance of duty is never unrewarded?

Oh ye weary toilers at the domestic hearth, know ye not that she who makes home life pleasant, healthy and attractive to her family and friends is wielding a more powerful weapon for the public welfare, is advancing the wave of civilization farther than though she sat upon one of earth's thrones, swayed the pen of the learned or gave utterance to the richest thought? The most powerful influence for good which has stirred the world, traced to its source, will be found to have been nourished by a patient woman who toiled, not seeing the end from the beginning, not thinking that the performance of duty meant drudgery. The narrow, monotonous round of domestic duty may broaden into tinted rims of Hope's glad morning if we will. Let us not forget that we are all equal in endowments for soul culture and that in this respect "We meet at one gate when all's over. The ways they are many and wide, and seldom are two ways the same. Side by side may we stand at the same little door when all's done! The ways they are many, the end it is one."

DETROIT, May 12th, 1883. I. F. N.

C. L. S. C.

I once heard a lecturer say: "If you don't know what the letters C. L. S. C. mean I shall not tell you, for you ought to know." I do not think the Chautauqua Literary and Scientific Circle needs any recommendation from my pen to advance its work, but I have noticed one or two articles lately in the Household Department on "Home Education" and "Mothers' Duty," which prompt me to write a few words in its favor.

Seeing the desire, not only for a better class, but a better way of reading, which a small local circle of this society has created in this place, I have wished that every farming community in Michigan might be equally benefitted. The unconscious stimulus of belonging to a class of thirty thousand, with all its auxiliaries of large and small "circles," its "triangles" and its solitary members, is far greater than one can possibly imagine who has not tried it.

The course which is prescribed for the C. L. S. C. reading this year is one which embraces a wide range of History, Literature, Hygiene, Astronomy and Geology, and no one who has ever felt the desire to read something more substantial than fiction, and more connected than magazine and newspaper articles, yet wished for some direction for what is best to read, cannot but be fully satisfied with this course. And yet not satisfied; for it only pushes the gate into the field of knowledge a little ajar, and we get a glimpse of its broad scope.

And when, every alternate Saturday, I see from six to eight busy housewives, who have spent the forenoon in baking, sweeping and mopping, come promptly and punctually to the place of meeting, and there give the results of the last two weeks' reading and study in the [shape of essays, conversation, recitations, inquiries and answers on the subject, I say as above, I wish there were still more interested in it. There is no time for gossip or scandal, no neglect of home duties, the buttons are sewed on tighter, the bread is made lighter, the rooms are better ventilated and more thoroughly cleaned; housework is not degraded but elevated by it. The text book has been studied while doing that very uncertain of tasks, churning; the history or Chautauquan has lain on the sitting-room table to be picked up while waiting for the men to come in to dinner; the dictionary and the encyclopedia have been used as they never were used before.

The course may be too extensive for the time or tastes of some, but the idea embodied in the plan is practicable to all. Let them take some one book and make a *study* of it, not simply read it for entertainment, but be able to give a synopsis of its contents to some one else. That book may be history, travels or some of the practical sciences, botany, physiology or physical geography, or good literature of any kind. No matter if we have studied all of these in younger days, if we go over them again two things will surprise us; first, how much we have forgotten, and second, how much better we understand them with our mature minds.

To be able to understand the technical diagnosis of the physician and the effects of his prescriptions is certainly a matter of duty, as well as the still greater one of knowing the laws of hygiene in order to dispense as much as possible with that physician's services. Also, to give the common botanical name to the "posy" the child brings in, or to classify the "pretty stones," or tell some of the wonders of the insect world. Are not these some of the mother's duties, as well as to spread the countless pieces of bread-and-butter, and tie for the thousandth time the cut fingers?

I once attended a rural party in the month of June, where a group of fashionably dressed ladies examined a large bouquet of garden flowers and talked of "large pink one," "those sweet white ones," and "*them* red ones;" they could have given the latest looping in overdresses, or told whether knife, box-pleating or ruffles were the most stylish trimmings, but they could not give the name of a single flower though they had seen the same, or of the same family, all of their lives.

History broadens our ideas of the world and its people, the sciences reveal marvelous wonders all around us, while literature gives us beautiful conceptions and increases the power of expression to our thoughts. The mother who embraces the opportunities which the C. L. S. C. affords will not, when the son or daughter comes home from college for a vacation, suffer that worst of humiliations in finding that her children have gone on in advance of her, that she can still minister to their material wants, but for their higher aspirations she has no word of encouragement, no sympathy. C.

LITTLE PRAIRIE RONDE, May 14th, 1883.

THE NECESSITY OF THEORIES.

The theories of our Queen Bee were called in question recently by one of the Household, the particular point being the training or management of children. I think the arguments used to refute the theories advanced were the exceptions needed to prove the rule, instead of being a lever to overturn the same.

Theories are something like methods or plans of management of household labor; they need to be very elastic, yet one can surely "get on" much better for having some plan, than to leave everything to chance.

If one's method makes Monday the "washing day," with a small effort that day will meet with a very general observance, and with grim determination few failures will result and this particular item will be made one of a general average.

The theory that children should be taught obedience, stands on the same ground. The few will persevere, the many will fail; but the fault is more in the parent or guardian than in the child. I grant you there are children of such perverse natures that even "model trainers" will fail to bring them to desirable habits, but fortunately they are the exception.

The cunning little darling will very often want to-morrow the things denied to-day, and long just as earnestly for them, but if the loving mother each and every time forbids, and has been firm in refusing the prohibited articles, it need not be a heavy task to induce the little one to surrender them to mamma.

It takes patience, infinite patience, to teach the lesson of obedience, but that is after all the ground work of all the rest; for if this lesson is faithfully taught, the next may be what you will. Even the wee one in its mother's arms may be taught something of obedience, of rights of property and of self-denial. When a child is old enough to learn that crying will procure the fulfillment of its wishes, it can be taught that it must do without coveted articles that are harmful for it; that the property of another must be respected and that it must wait the reasonable pleasure of the owner. Many parents do great injustice to their children by requiring the older to yield their wills, their toys and privileges at all times to the younger. A generous spirit should be encouraged, of course, but the plea, "O, give it to him, he is the baby!" makes one heart swell with a sense of injustice, and fosters a small tyrant that, however cunning he may be, will have some hard lessons to unlearn before he will become a pleasant character to any but doting parents. Give unlimited love and wise freedom of development, but let the little ones know that lines of restraint and control exist, and must be respected.

GREENFIELD, May 12th, 1883. A. L. L.

LOOKING AT THEM.

"Flowers and plants always do well for you. You have only to look at one and it is sure to grow." Who of us, loving our floral treasures too well to neglect them and in caring for them striving to understand and answer to their separate needs, has not heard the above exclaimation; and who of us, with a swift mental review of the tugging, weeding and watering of the season, has not solemnly thought, whether she said it or not, "A plant cannot live on *looks* alone." When the soft spring rain comes with healing in its drops, the window plants seem to plead to be like Glory McWhirk, "in it," and in spite of all past promises to herself, their mistress is sure to carry them out—the sickly and dusty first, then another and another, until all are transferred.

I say in spite of past promises, for we well know that the rain, said to fall alike upon both the just and unjust, is quite apt to turn back from the house-plant and with a sudden change of programme, leave it as dry and dusty as before, to be returned to the house by its tired, disappointed, or *mad* owner, as her temperament may chance to be. How that woman does toil over them! The woods, the fence corners and the swamps are searched for suitable soil. In the absence of the convenient, but often unattainable pot, she cleans paint kegs and rigs up tin cans with a zeal that cuts her fingers and ruins the butcher-knife. Then she thinks that here or there would be a nice place for some favorite vine or annual. She knows that it is fond of rich soil just as well as she knows that "he" is fond of warm biscuit; and with the feminine instinct of serving those we love, she sets about digging out the hard soil and bringing some that is nice and soft from ever so far away, perhaps, to put in its place. I wonder how a man would look trimming a spring bonnet? I know how a woman looks handling a spade; and I know how she feels when she throws the force of her whole weight upon that implement and it strikes a stone and rebounds against the inside of her skull. She doesn't even think of profanity, for hers is a labor of love, but at this time and at many other times she bears very little resemblance to her lilies, while she may often think of my introductory exclamation and ask herself, "Is this looking at them?" A. H. J.

THOMAS, May 18th, 1883.

Farmers, Their Personal Appearance.

The following, from the Women's Department of the *Rural New Yorker*, is as applicable and as true in Michigan as in the Empire State:

"We were in the city on the day for electing officers in the Farmers' Mutual Insurance Company. At first we did not think of what was going on, and wondered why there were so many men moping along, with heads down and hands thrust into the pockets of their pantaloons, looking like turkeys hunting buckwheat. When we remembered what was going on we were provoked beyond measure. What is there about farming to make a man look so much like distress as many of our farmers do when away from home? We can't see why a good, honest farmer should be ashamed of himself or his occupation, and yet the crowd we saw on that day had many in it who looked as though they might have been caught stealing and were on their way to prison. Why a farmer can't have respectable clothes made to fit him, and why he can't put them on right, and why he can't keep his hands out of his pockets and hold up his head and look as though he felt he was a man among men, is more than we can tell. Yet we know lots of them do not. Many an intelligent man would be really good-looking if he had his hair cut a proper length, his whiskers trimmed and himself put in good shape; but, as he goes, might be mistaken for a laborer. Our father was a farmer, our husband is a farmer, and for this class we have great love and respect, because we know their worth; and our blood fairly boils when we hear brainless fops saying: 'See the buckwheat's boots.' We do wish farmers would have a little more regard for their own appearance as well as that of their families. We should be very sorry to advocate extravagance, but it won't cost much to keep your hair well brushed, your whiskers becomingly trimmed, your hands out of your pockets and to hold up your head. As for clothes, the most economical farmer we ever knew, or one of the most economical, has been many times taken for a minister. He gets new clothes but seldom, and when he does, he is very particular about their quality and fit, is very careful to keep them clean and neat; his collar and necktie are always right. These are little things, but go a great way toward making a good appearance. Care about small matters make the gentleman; disregard of them the clown. We don't intend to hint that all farmers are so careless, but there are far too many who are so both in dress and manners. Mothers, take care of your boys and make them keep their hands out of their pockets, their hair nicely brushed, teeth clean, nails pared and clean, and have a care for their appearance generally; so that when they become men they will not fail of showing themselves to be such; and there is no reason why farmers should not be gentlemanly."

Veterinary Department

Conducted by Prof. Robert Jennings, late of Philadelphia, Pa., author of "The Horse and its Diseases," "Cattle and their Diseases," "Sheep, Swine and Poultry," "Horse Training Made Easy," etc. Professional advice through the columns of this journal to regular subscribers free. Parties desiring information will be required to send their full name and address to the office of the Farmer. *No questions will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given the symptoms should be accurately described, how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Private address, 201 First Street, Detroit.*

Softening of the Heart in a Ram.

Plymouth, Mich., May 10th, 1883.

Veterinary Editor Michigan Farmer.

Dear Sir:—I had a ram one year old that was shorn about two weeks ago, was in good condition, been housed all winter and had not been out to grass yet. Last night he did not come to his feed with the rest; this morning he would not eat but drank a little water; examined him but could see nothing unusual about him except that he would stand by himself humped up. I gave him about a spoonful of tar and in about two minutes he dropped down and went into convulsions and died in about ten minutes. On being opened found the top of one lung slightly discolored, his gall very large, heart case filled with water and heart soft, a portion of his small intestines was badly discolored and on their being cut open discharged a clear, dark-green fluid something like gall. All other parts seemed to be in a healthy condition. Can you tell from my description what was the matter with the ram, and if so the remedy? Also what caused the convulsions and sudden death after giving the tar?

T. V. Quackenbush.

Answer.—Your description of the symptoms and pathological condition of the carcass of your ram is too indefinite to enable us to answer your questions in a satisfactory manner. That the heart and the pericardium or sack around the heart, was in a morbid condition is plain enough, but it is not plain whether the disease was a primary or secondary condition—symptomatic or indicative of some other disease or complication. Autopsies made by non-professionals are not satisfactory, from the fact that many morbid conditions are overlooked and healthy mistaken for diseased. There are three varieties of softening of the heart, viz.: the red, the white and the yellow. These several varieties of softening may be partial or complete, usually arising from disordered nutrition or inflammatory action. The symptoms in our domestic animals in such cases, are so obscure as rarely to be detected in time to save the animal's life. In answer to your second inquiry, we can assign no cause for the convulsions, unless the animal was strangled in the attempt to administer the tar. We feel safe in the assertion that the tar in itself in the quantity named was not the cause of death.

Probably Calculi or Gravel Concretions in the Kidneys or Bladder of a Horse.

Farmington, Mich., May 14th, 1883.

Veterinary Editor Michigan Farmer.

Dear Sir:—I have a grey gelding five years old, which has been troubled since last summer with a urinary difficulty. I have given him two or three doses of nitre and balsam of Cupaiba, which helped him, and I did not do anything more for him. This spring he is in the same condition again. I gave him salt-petre and condition powders, which helped him for two or three weeks, then he got worse again. He gets thin and gaunt when he is worst, and his hair looked rough before I gave him the medicine.

Reader.

Answer.—From the symptoms given we are of the opinion that the trouble with your horse arises from calculus concretions or gravel, either in the kidneys or bladder, which give rise to such symptoms as you have described. The treatment we would recommend in this case is a simple one, which from its therapeutic action can do the animal no harm, even though we err in our diag nosis. Give in a pail of water twice a day two drachms hydrochloric acid. To clean the sheath properly use castile soap and water with a soft sponge, and then apply a little lard or cosmoline.

Cribbing in the Horse.

Veterinary Editor Michigan Farmer.

Please give through the columns of your paper a cure for cribbing. My horse is four years old; commenced the past winter.

Fred K. Alchin.

Answer.—We know of no cure for a cribbing horse. We have given our views upon this subject in these columns on several former occasions. The cribbing muzzle made for that purpose will prevent a horse from cribbing, but will not cure him.

COMMERCIAL.

DETROIT WHOLESALE MARKET.

Detroit, May 23, 1883.

Flour.—Receipts for the week, 2,781 bbls; against 3,558 bbls the previous week; shipments, 2,954 bbls. Flour is barely steady, owing to the unsatisfactory state of the wheat market, and demands are limited to present necessities. Both stocks and receipts are light. The local demand is fair. Quotations yesterday were as follows:

Roller process	$5 75	@
Winter wheats, city brands	5 30	@5 50
Winter wheat brands, country		@5 00
Winter patents	6 50	@6 75
Minnesota brands	6 00	@6 25
Minnesota patents	7 50	@8 50
Rye flour	4 00	@4 25

Wheat.—The market opened yesterday quite strong and at an advance over Saturday's closing figures, but during the day a weaker feeling set in that resulted in most of the advance being lost. Quotations closed at the following range: No. 1 white, $1 06⅜; No. 2 do, $1; No. 3 do, 83½c; No. 2 red, $1 13; No. 3 do, $1 10; rejected, 77¾c. In futures closing prices were as follows: June, $1 06⅞; July, $1 08¾; August, $1 09½.

Corn.—Market quiet and without essential change. Stocks are light and holders continue to exhibit firm views as to prices, as the outlook for the new crop is not regarded as favorable. Sales were made yesterday of two cars No. 2 at 59c; one car new mixed at 56c; high mixed 59½c bid, 60c asked.

Oats.—Quiet and steady, the feeling if anything being a little stronger but without essential change. No. 2 white 47½c; No. 2 mixed, 44¼c bid, 44⅝c asked.

Barley.—Nothing doing; nominal terms are about $1 25@1 60; offerings are seldom of such quality as to be worth outside figures.

Feed.—Inactive; offerings are light. Bran would command about $14@14 25, coarse middlings at $15, and fine feed at $17@18; corn meal, $23@24; corn and oats the same.

Oatmeal.—Fair demand at $5 75@6 25 for common, and $7 25@7 50 for Ohio kiln-dried.

Butter.—Yesterday the market showed a little weakness under improved receipts of fresh. For best parcels 18@19c ℔ ℔ appear about the best figures offered. Creamery is selling at 25@28c.

Cheese.—Demands rather light, but up to the supply. New full cream State is quoted at 13@14c ℔ ℔, the latter only for very choice. Eastern markets are lower, but so far our local market has not been affected.

Eggs.—Market well supplied and quiet at 15@15½c per doz.

Beeswax.—Scarce and very firm; quotations are 26@30c per lb.

Beans.—Nothing doing. Picked, $1 95@2 00 per bu.; unpicked, $1 40@1 50.

Apples.—Good stock nominal at $3@4 00 per bbl, with poorer stock quoted at $2@2 50 per bbl.

Dried Fruit.—Market dull; apples, 8@8¼c; evaporated fruit, 14@15c; peaches, 15@16c; evaporated, 30@31c; pitted cherries, 29@30c; raspberries 10@11c; California plums, 18c.

Honey.—Dull and weak. Fine white comb is quoted at 15@16c; strained, 12½c.

Maple Sugar.—Market quiet at about 12½@13c for pure.

Hops.—Dull. It would be impossible to obtain more than 85@90c ℔ ℔ for choice hops.

Peas.—Wisconsin dried blue peas, $1 25; field peas, $1@1 10 per bu.

Potatoes.—Market quiet. Early Rose would command 50c if in good condition, while mixed stock is dull at lower figures. New Bermudas are selling at $6 50@7 00 per bbl.

Seeds.—Clover is nominal at $7 per bu. for prime, timothy, $1 85, and millet 75c@$1 00.

Provisions.—Both pork and lard are weak and lower; smoked meats are steady and unchanged; dried and mess beef are firm and higher. Quotations in this market are as follows:

Mess	$20 00	@$20 25	
Family do		@ 20 75	
Clear do	21 75	@ 22 00	
Lard in tierces, per ℔	11⅞@	12	
Lard in kegs, per ℔	12⅜@	12½	
Hams, per ℔		@	13¾
Shoulders, per ℔	9¼@	9½	
Choice bacon, per ℔	12¾@		
Extra Mess beef, per bbl	13 25	@ 13 50	
Tallow, per ℔	7½@	7¾	
Dried beef, per ℔	14	@	14½

Hay.—The following is a record of the sales at the Michigan Avenue scales for the past week:

Monday.—6 loads: two at $12 and $14; one at $15 and $13 50.

Tuesday.—18 loads: six at $14; three at $15 and $13; two at $14 50 and $13 50; one at $11 and $10.

Wednesday.—35 loads: ten at $13; five at $15; four at $12; three at $14 and $13 50; two at $12 50 and $11; one at $16, $15 50, $14 50, $13 25, $11 50 and $10.

Thursday.—28 loads: eight at $13, five at $12; four at $14; three at $16; two at $15, $13 50 and $12 50; one at $11 and $10.

Friday.—19 loads: seven at $14; three at $12 50; two at $15 and $10; one at $16, $15 50, $13, $11 50 and $10 50.

Saturday.—2 loads: one at $14 and $13.

LIVE STOCK MARKETS.

At the Michigan Central Yards.

Saturday, May 19, 1883.

The following were the receipts at these yards.

	Cattle. No.	Sheep. No.	Hogs. No.
Albion	...	...	111
Battle Creek	45	...	5
Chelsea	30	...	13
Charlotte	18	...	20
D., G. H. & M. R'y	30	100	29
Grass Lake	20	...	...
Grand Ledge	16	25	7
Howell	17	5	21
Jonesville	27	...	...
Lapeer	9	...	...
Lansing	17	...	...
Milford	47	...	...
Milan	5	...	28
Mt. Morris	14	...	...
Metamora	20	...	...
Onandaga	10	76	16
Okemos	20		10
Plymouth	7	6	...
Portland	26	10	128
Williamston	23	...	9
Wixom	21	...	...
Ypsilanti	27	...	...
Drove in	19	...	...
Total	468	222	397

CATTLE.

The offerings of cattle at these yards numbered 468 head against 586 last week. The market opened up dull, shippers and local dealers holding off for lower prices. The cattle shipped east last week, in every case lost money, and this had a bad effect on the trade. However when all the trains had arrived and it was seen that the receipts were smaller than usual. the market become quite active and all the offerings changed hands. Prices at the opening were fully 25 cents per hundred off from last week, but later there was an improvement and the difference did not amount to more than 10 to 15 cents. The following were the closing.

QUOTATIONS:

Good to choice shipping steers	$5 75	@6 50
Fair shipping steers	5 25	@5 50
Good to choice butchers's steers	5 40	@6 25
Fair butchers' steers	4 85	@5 25
Fair to good mixed butchers' stock	4 85	@5 50
Coarse mixed butchers' stock	4 15	@4 65
Bulls	3 50	@5 00
Stockers	4 25	@4 50

Brown & Spencer sold Duff & Reagan a mixed lot of 11 head of thin butchers' stock av 920 lbs at $4 70.

G D Spencer sold Robinson a mixed lot of 7 head of coarse butchers' stock av 630 lbs at $4.

Hyman sold Duff & Caplis a mixed lot of 16 head of thin butchers' stock av 752 lbs at $4 60.

Tice sold Fitzpatrick a mixed lot of 10 head of good butchers' stock av 837 lbs at $5 25.

Stead sold Duff & Caplis a mixed lot of 6 head of thin butchers' stock av 1,023 lbs at $4 70, and 4 bulls av 850 lbs at $4.

Dunning sold Drake 6 stockers av 700 lbs at $4 60.

G D Spencer sold Flieschman 3 coarse cows av 1,022 lbs at $4.

Stead sold Drake 10 feeders av 863 lbs at $5.

Hall sold Sullivan a mixed lot of 9 head of thin butchers' stock av 727 lbs at $4 60, and a bull weighing 710 lbs at $3 75.

Dunning sold Duff & Caplis a mixed lot of 9 head of good butchers' stock av 920 lbs at $5 25, and 6 coarse ones av 850 lbs at $4 50.

Spencer sold Sullivan 12 good butchers' steers and heifers av 1,000 lbs at $5 40, and 3 coarse cows av 1,126 lbs at $4.

McMullen sold Sullivan 15 good shipping steers av 1,133 lbs at $5 65.

Little sold Sullivan 4 thin butchers' cows av 1,045 lbs at $4 75.

Campbell sold Oberhoff 6 good butchers' steers av 1,013 lbs at $5 25.

C Roe sold Rice a mixed lot of 24 head of good butchers' stock av 870 lbs at $5 25, less $8 on the lot.

Campbell sold Drake 4 feeders av 762 lbs at $4 85.

Wreford & Beck sold Reid 25 western butchers' steers av 945 lbs at $5 75.

Goodworth sold Drake 6 stockers av 620 lbs at $4 50.

Bray sold Flieschman 3 fair butchers' steers av 816 lbs at $5.

C Roe sold John Robinson a mixed lot of 23 good butchers' stock av 933 lbs at $5 35.

McMillan sold Flieschman 15 good shipping steers av 1,180 lbs at $6 20.

Smith sold Drake a mixed lot of 15 head of thin butchers' stock av 774 lbs at $4 65.

Green sold Drake 11 good butchers' steers av 963 lbs at $5 37½.

Sullivan sold Rice 12 good butchers' steers av 1,000 lbs at $5 55.

Smith sold Sullivan 8 fair butchers' steers av 1,026 lbs at $5 25; 4 coarse cows av 1,055 lbs at $4 25, and 3 thin heifers av 630 lbs at $4.

Goodworth sold McGee a mixed lot of 14 head of coarse butchers' stock av 720 lbs at $4 25.

Bray sold Drake 9 good oxen 1,617 lbs at $5 35.

Ramsey sold John Robinson 14 good butchers' steers and heifers av 950 lbs at $5 40.

Hyman sold Drake a choice butchers' heifer weighing 1,100 lbs at $6 25.

SHEEP.

The offerings of sheep numbered 222, against 213 last week. The sheep trade is at a standstill at present and prices are nominal. On Saturday two bunches were sold, one of 76 wooled av 86 lbs at $6 10, and 100 clipped av 84 lbs at $5 25 per hundred.

HOGS.

The offerings of hogs number 397, against 354 last week. The hog market ruled dull, with prices 10 to 15 cents per hundred lower than those of last week.

Switzer & Ackley sold Bigley 46 av 212 lbs at $7 15.

Hyman sold Webb Bros 10 av 239 lbs at $7 25.

Smith sold Webb Bros 12 av 195 lbs at $7.

Little sold Webb Bros 10 av 220 lbs at $7 10.

Dunning sold Webb Bros 11 av 162 lbs at $7.

Goodworth sold Webb Bros 18 av 266 lbs at $7 35.

Stabler sold Bigley 24 av 180 lbs at $6 90.

King's Yards.

Monday, May 21, 1883.

CATTLE.

The market opened up at these yards with 219 head of cattle on sale. There was a fair attendance of buyers, and for good cattle the market was firm at last week's rates. For common stock the demand was less active and prices were 10 to 15 cents lower than those of last week.

Oberhoff sold H Roe 4 choice butchers' steers av 1,122 lbs at $6 25, and one to Smith weighing 940 lbs at the same price.

Bliss sold John Wreford 3 coarse cows av 856 lbs at $4 30.

Bliss sold Flieschman a mixed lot of 6 head of fair butchers' stock av 980 lbs at $5 05.

Nott sold Sheldon an extra heifer weighing 1,280 lbs at $6 75.

Harger sold Hersch 8 choice butchers' steers av 960 lbs at $6.

Wietzel sold Drake 12 stockers av 790 lbs at $4 50.

Bliss sold Stucker a mixed lot of 4 head of thin butchers' stock av 700 lbs at $4 60.

Adams sold Stucker 3 thin butchers' heifers av 713 lbs at $4 70, and 2 steers av 900 lbs at $4 80.

Harger sold Baxter 3 good butchers' steers av 973 lbs at $5 75.

Chase sold Stucker a mixed lot of 5 head of coarse butchers stock av 814 lbs at $4 40, and 2 bulls av 775 lbs at $4.

Harger sold Brown a mixed lot of 5 head of coarse butchers' stock av 682 lbs at $4 40.

Vanderhoof sold Drake 3 stockers av 690 lbs at $4 70.

Brown sold Heutter 3 good butchers' steers av 913 lbs at $5 55.

Patten sold Marshick 4 good butchers' heifers av 600 lbs at $5 25.

Smith sold Duff & Caplis a mixed lot of 18 head of good butchers' stock av 854 lbs at $5 30.

Adams sold Nott 5 fair butchers' steers av 934 lbs at $5 10.

Harger sold Duff & Capis 3 good butchers' steers av 866 lbs at $5 65.

Bliss sold McGee 2 bulls av 1,365 lbs at $3 80.

Aldrich sold Marx a mixed lot of 4 head of good butchers' stock av 762 lbs at $5 25, and 2 choice steers to Stickel av 1,185 lbs at $5 90.

Chicago.

Cattle.—Receipts, 33,314, against 26,757 last week. Shipments, 17,061. The market for cattle opened up on Monday with a fair supply and a dull feeling. Later in the day the demand improved and before the close about all were disposed of. Extra steers sold at $6 45@6 60; choice, $6 25@6 40; good, $6@6 15; medium grades, $5 75@5 90; butchers' stock, poor to choice, $4@5 75, and scalawags at $2 50@3 50. The market ruled steady until Thursday when there was a bad break in prices, amounting to 15@25 cents per hundred, butchers' cattle suffering the least. The receipts were light on Friday and Saturday, and the feeling firmer. The followieg were the closing.

QUOTATIONS:

Extra Beeves--Graded steers weighing 1,300 to 1,450 lbs and upwards	$6 30	@6 40
Choice Beeves—Fine, fat, well-formed 3-year to 5-year-old steers, weighing 1,350 to 1,450 lbs	6 10	@6 20
Good Beeves—Well-fatted steers, weighing 1,200 to 1,300 lbs	5 80	@6 00
Medium Grades—Steers in fair flesh, weighing 1,100 to 1,200 lbs	5 50	@5 70
Butchers' Stock—Inferior to common steers and heifers, for city slaughter, weighing 900 to 1,000 lbs	4 00	@5 50
Inferior—Light and thin cows, heifers, stags, bulls and scalawag steers	2 50	@3 50
Veals—Per 100 lbs	3 75	@7 25

Hogs.—Receipts, 82,934, against 62,029 last week. Shipments, 13,696. On Monday the hog market opened with 15,000 on sale. The market ruled fairly active, with poor to prime light selling at $7 05@7 40; inferior to good mixed at $7@7 40; poor to choice heavy, $7 35@7 75; skips and culls, $5 50@7. Up to Thursday the market continued active and steady, but the receipts proved more than the demand called for, and prices fell off 15@20 cents per hundred, with quite a number of hogs unsold. There was a better feeling in the trade on Friday and sellers obtained an advance of 5 cents per hundred. On Saturday the market was fairly steady and closed with poor to prime light selling at $6 90@7 25; inferior to good mixed, $6 80@7 25, and poor to prime heavy at $7 25@7 55.

Buffalo.

Cattle—Receipts, 11,093, against 11,730 the previous week. The supply of cattle on Monday was large, consisting of 134 car loads. The market ruled dull and shipping cattle ranged from 20 to 30 cents per hundred lower than at any time the week previous. Common cattle and mixed butchers' stock were in fair demand, and did not suffer so much in prices, but they too were lower. Tuesday's market showed no change, and on Wednesday with favorable reports from the east the market improved and prices were stronger. Of Michigan cattle 29 steers av 931 lbs sold at $6; 21 do av 888 lbs at $5 75; 15 do av 1,082 lbs at $6 25; 25 do av 939 lbs at $5 87½; 18 do av 1,350 lbs at $6 42½; 23 do av 1,088 lbs at $6 25; 18 do av 1,032 lbs at $6 12½; 19 do av 1,112 lbs at $6 05; 21 do av 888 lbs at $5 85; 21 do av 822 lbs at $5 40; 16 do av 954 lbs at $5 65; 32 do av 1,444 lbs at $6 65; 24 do av 1,208 lbs at at $6 30; 23 do av 994 lbs at $6 15; 19 do av 1,108 lbs at $6 15; 22 do av 905 lbs at $5 62½. The following were the closing

QUOTATIONS:

Extra Beeves--Graded steers weighing 1,050 lbs and upwards	$6 70	@6 90
Choice Beeves—Fine, fat, well-formed steers, weighing 1,300 to 1,400 lbs	6 30	@6 60
Good Beeves—Well-fattened steers weighing 1,200 to 1,350 lbs	5 90	@6 25
Medium Grades–Steers in fine flesh, weighing 1,050 to 1,250 lbs	5 40	@5 75
Good Butchers' Beeves—Light, fat steers weighing 900 to 1,000 lbs	4 85	@5 25
Heifer—Fair to choice	4 50	@5 20
Cows and Heifers—Good to choice	4 00	@5 25
Texans and Cherokees	4 50	@5 00
Mixed Butchers' Stock—Common steers, stags, old cows, light heifers, etc	4 00	@5 00
Feeders—Good to choice western, weighing from 950 to 1,000	5 00	@5 60
Canadian feeders	5 00	@5 75
Stock Steers—Western, weighing 600 to 900 lbs	3 50	@4 90
Stock bulls	3 75	@4 25
Butchers' do, fair to good	4 25	@5 40
Veals—Fair to prime of 160 to 210 lbs average	4 00	@5 00

Sheep.—Receipts, 19,600, against 18,600 the previous week. The market opened up on Monday with 43 loads of sheep on sale. Prices were lower at the opening than on the Monday previous, but as the receipts fell off on Tuesday and Wednesday prices advanced, and the close ranged a shade higher than those of the previous week. But few Michigan sheep were offered. Fair to good clipped sheep of 80 to 90 lbs sold at $4 80@5 50; 90 to 100 lbs, $5 40@5 70; 100 to 120 lbs, $5 75@6. We note sales of 318 Michigan sheep av 115 lbs at $6 25; 125 av 85 lbs at $5 25; 606 av 121 lbs at $6 25; 30 av 102 lbs at $5 75; 125 av 87 lbs at $4 75; 111 av 68 lbs at $4 50; 137 av 74 lbs at $5; 201 lambs at 61 lbs $7 95. The sheep were all clipped.

Hogs.—Receipts, 24,855, against 27,140 the previous week. The hog market for the three days of the week was fairly active, and at the close with the supply picked up the market closed firm, with good to choice Yorkers, $7 60@7 75; fair to good do $7 35@7 55; medium grades fair to choice, $7 75@7 90; good to extra heavy, $7 85@8. Pigs, common to choice, $7@7 25; skips and culls, $5 50@6 75.

NEW ADVERTISEMENTS.

ON THE EDGE OF THE MARSH.

IN NOVEMBER.

Dead sienna and rusty gold
Tell the year on the marsh is old.
Blackened and bent, the sedges shrink
Back from the sea-pool's frosty brink.
Low in the west a wind-cloud lies,
Tossed and wild in the autumn skies.
Over the marshes, mournfully,
Drifts the sound of the restless sea.

IN JUNE.

Fair and green is the marsh in June;
Wide and warm in the sunny noon.
The flowering rushes fringe the pool
With slender shadows, dim and cool.
From the low bushes "Bob White" calls;
Into his nest a rose-leaf falls,
The blue-flag fades; and through the heat,
Far off, the sea's faint pulses beat.

—*Harper's Magazine.*

THE WRONG COAT.

BY ROSE TERRY COOKE.

"Fire! Fire."

Jack Parry rubbed his eyes, as he sprang out of his cot-bed in the loft, and instinctively hurried on his trousers. His father's head rose above the ladder, just as he shuffled on his shoes, shouting:

"Hurry up, I tell ye! woods afire! Comin' this way quicker'n scat!"

Jack scrambled down the ladder without stopping for his jacket. He knew what the news meant—he had heard about forest fires before. His father had always thought that the creek which ran in front of their house would guard them, but now the air was dark with smoke, and he could hear the roar and crash of the forest falling before its mighty foe, while sharp gusts of wind swept ashes far and wide over the grain fields of the farm, but the fire was still on the other side of the slow, narrow stream; could it, would it keep the enemy from their house and barns?

It would not do to run the risk. Jack, at a word, went off to harness the horses and put them to the big wagon, while his father helped his mother to gather a few wraps and valuables together, and dress the frightened, screaming baby.

When the Parrys moved to Michigan, Grandpa Dibble, who always objected to everything, said to his son-in-law:

"But how'll ye edicate the children, John?"

"I don't know, father," said John Parry. 'Sary'll teach 'em to read and write, prob'ly, and I'll insure they'll learn to mind and be honest, I take it these two things will have to underlay any eddication that's good for shucks; we must risk the rest."

Obedience and honesty Jack had indeed been thoroughly taught. He had never harnessed the horses alone before, but at his father's order he went to work manfully, and was all ready when the others came to the house door.

"Oh, Jack! no coat on?" said the delicate, trembling little mother.

"Can't stop for it now," said John Parry. "It's life or death, Sary! There goes a big whitewood smash across the crick! Run the critters, Jack—the fire's after us!"

In another moment they were beyond the house, but not an instant too soon, for a burning branch, whirled on by the fierce wind, swept through the air and lit on the roof, which blazed like paper beneath it.

Jack lashed the terrified horses into a run, while his father, on the back seat, held the sick baby in one arm, and put the other about his wife to steady her.

The air grew heavier and hotter; the roads were rough, wagon-springs hard. Blinded with smoke, and frightened at the nearing roar of the storm and flame, the horses flew on beyond the power of any guiding hand. There was a sudden lurch, the wheels tilted on a log by the wayside, and the back seat pitched out behind, with all its occupants! Jack clung to the reins instinctively, but he could no more stop the horses than he could arrest the whirlwind and fire behind him. Father, mother, sister, all were tossed into the track of fire like dry leaves, and never again did he see one of them. Their fate was certain; he could only hope it had been sudden and sure death.

Carried on by a force he could not control or resist, Jack whirled along, the flames nearing him every moment, till, just as he felt their hot breath on his neck, the maddened horses reached the lake shore, and plunged headlong into its waters. But he, at least, was safe, for the shock threw him out on the sand.

Poor Jack! In the morning he was a hearty, happy boy, asleep in a good home; at night, a homeless, penniless orphan, with scarce clothes to cover him. Days passed over his head in a sort of blank misery. A few others, escaped also from the devouring flames, shared with him their scanty food; a kindly woman gave him an old woolen sack she ill knew how to spare to cover his ragged shirt, and he found a pair of India rubbers lying on the shore, which concealed his worn shoes, but a more desolate, helpless creature than the poor boy can hardly be imagined.

After a week or two, he begged his way to Pompo—a settlement farther up the lake, which had not been touched by the great fire—and heard there that good people at the east had sent on clothes to be distributed among those who had lost theirs. He soon got a chance to ride over on a lumber wagon to the nearest place where these things were given out—a town ten miles beyond Pompo—and there the agent gave him a couple of shirts, a warm vest, a pair of half-worn black trousers, and a very good coat of mixed cloth that until then had proved too small for the men who had applied for clothes. But as Jack was fifteen, and large for his age, it just fitted him, and once more clothed neat and clean, he went back to Pompo, where he had found a place to work on a farm, happier than he had been for a long time.

It was night when he returned to the farm, and quite bed-time; so he ate some bread and milk Mrs. Smith had saved for him, and went up to his garret chamber. As he took off his new coat to hang up, with a boy's curiosity he explored all its pockets. In one he found a half-soiled handkerchief, just as if the owner had taken the coat down from the closet peg and sent it off without a thought, for the garment was almost new. But underneath the handkerchief, lying loose in the bottom of the pocket, were two twenty dollar bills!

Jack's heart gave a great bound; here was a windfall indeed, and he began to think what he should do with this small fortune. But perhaps there was something else in the other pockets—yes, here was a letter directed, sealed, and stamped, all ready to mail; and in a small inner breast-pocket he found three horse-car tickets, a cigarette, and a three-cent piece. In the other breast pocket was a gray kid glove, and a card with the name, "James Agard, Jr. He looked at the letter again; on one corner was printed: "Return to James Agard & Co., Deerford, Conn., if not delivered in ten days." Jack was not a dull boy, and is flashed across him at once that this coat had been put into the box by mistake; it must have belonged to James Agard, Jr. He looked again at the handkerchief, and found that name on the corner.

What should he do? The coat had been given to him—why not keep it? He sat down on his bed to think; his short end of tallow candle had gone out, but the risen moon poured a flood of mellow light through his window, and seemed to look him in the face. While he thinks the thing out at the West, let us take up the Eastern end of the story.

Just three days after the great fires, certain prompt young people in a New England church congregation came together in the parlors of that church to receive and pack clothing for the burnt out sufferers; and for a week contributions poured upon them, and gave them work for both head and hands. Into this busy crowd one day, hurried a slight, active young man, dressed in a gray business suit.

"Hallo!" he called out cheerily. "I've come to help the old-clo' boxes along. Give me work at once, Mrs. Brooks—anything but sewing."

Mrs. Brooks laughed.

"Can you pack a barrel, Mr. Agard?"

"Yes, indeed; just pile on the things," and he went to work with an alacrity that showed he knew how to do his work. This energetic little man packed more than one barrel before night, and, in order to work better, threw his coat aside, as the rooms were warm. When evening came, he drew himself up with a laugh, exclaiming:

"There! I can 'go West, young man,' and earn my living as a pork-packer, if you'll only recommend me, Mrs. Brooks."

"That I will," said she, "and others, too. We have sent off ten barrels since you came in, Mr. Agard; we had to hurry, for the freight train left at four o'clock."

Just then he turned to look for his coat. It was not where he left it. He searched the room in vain, and at last called out.

"Has anybody seen my coat?"

"Where did you leave it?" asked George Bruce, a young man who had also been packing very busily.

"On the back of that chair."

"Was it a mixed gray sack?"

"Yes."

"Well, sir, it's gone off to the sufferers, then. I saw it on the chair, thought it was a contribution, packed it, headed up the barrel, and sent it on the train."

"What! You're a nice fellow, Bruce—sent my coat off! how am I to get home?"

"It's too bad," said Mrs. Brooks. "I'll take you home in the carriage, Mr. Agard."

"Thank you kindly; but that isn't all. I had forty dollars in one pocket, and a letter to be mailed with a thousand-dollar check in it. I must hurry home and have that check stopped; the bills will go for an involuntary contribution, I suppose. Bruce, I feel like choking you."

"And I'm willing to let you, Jim, it'll relieve your mind. It was outrageously careless of me. I don't suppose there's the slightest chance of tracing it."

"No more than a dropped penny in Broadway. Miss Van Ness won't have her Jacquminot roses for the german, though, and I'll tell her it was your fault—I can't throw away any more dollars on nonsense. But I'm not sure the money is lost as much as it might have been, old fellow. Mrs. Brooks, I'm ready."

And so James Agard went home, stopped the check by telegraph, and sent an excuse to Miss Van Ness for not attending her german. The roses were to have been a surprise to her, so she did not miss them.

We left Jack sitting in the moonlight, doubting and distressed. But he did not sit there long, for suddenly there came to him a recollection of what his father had said concerning his education to Grandpa Dibble; his mother had repeated it to him so often that it was fixed in his memory. He hid his face in his hands, for it grew hot with shame to think he had not seen at once that he must send the coat back to its owner. Jack did not hesitate—the right thing must be done quickly. He folded the coat as well as he knew how, replacing everything in the pockets, except the three-cent piece, for which he had a use. Then, quite sure that Mr. Smith, who had hired him, was not the man to understand or approve his action, he made up his mind not to wait the morning, but to go directly back to Dayton, where he had received his clothes, and where the nearest express office was stationed. He could not return the coat to the agent, for he had distributed all the clothes destined for that point, Jack being one of the last applicants, and had gone on further with the rest; so he rolled it up in a newspaper and slipped down stairs, with his shoes in his hand, putting on over his vest the old red sack he had worn before, and set out for Dayton.

He had to beg his breakfast when he reached the town; then he bought a sheet of brown paper, a string and a postal card with the three-cent piece, and, sitting down on the sunny side of the lumber pile, made the coat into a neat little bundle, firmly tied.

He asked the use of a pen and ink at the express office; directed his package and wrote his postal as follows, for he could write well, though a little uncertain as to his spelling:

"DAYTON,——

"DEAR SIR:—I send you by express to Day a coat which i got in the close sent to burnt out fokes here, i doan't believe it ought to hev come, so i send it to the name onto the leter, all things Within except 3 sents used for paper, string, and kard. JACK PARRY."

Jack felt a great weight off his mind when the bundle was fairly out of his hands. It was hard to send away help he needed so much—harder for a homeless, penniless boy than you know, dear Tom and Harry—you have never been hungry, ragged, and orphaned.

And he not only lost his coat, but his place, for he knew very well, when he left the farm-house, that Mr. Smith, who was a hard and mean man, would never take back a boy who ran away the first night of his service, especially if he knew it was to return a good coat with money in the pocket.

Still he felt that his father and mother would have thought it dishonest to keep it, and with the courage of a resolute boy, he felt sure he could find work in Dayton. But he did not. There were plenty of boys, and men, too, already asking for work, and nobody knew him, nor had he any recommendations.

For several nights he slept in an empty freight car near the railway station, doing a little porter's work to pay for his shelter; and some work about the tavern stable for his board, sleeping in the shed or in the hay-mow; and once in a while he caught himself wishing he had that forty dollars to get back to Connecticut, where he had distant relatives. But the quick thought "What would mother say?" repressed the wish at once.

At last he found steady work on a farm out of town with small wages. But he had a loft and a bed to himself, and his chief work was to drive a team to Dayton and back with produce, or to fetch lumber, coal, and produce to his employer and the neighbors.

One day about a month after he went to this place, as he was driving a load of coal past the express office, walking his horses, for the load was heavy and the mud deep, the clerk saw him, and running to the door, called out:

"Say, young fellow! D'you know anybody name of Jack Parry?"

"I guess so," said Jack, with a smile; "that's my name. What's to pay?"

"Nothin'—it's prepaid. I had a faint reklektion that a fellow about your size left a package here a while ago directed to James Agard. I wasn't real sure't was you, for you aren't rigged out so fancy as you was. What have you done with that red jacket, sonny? Haw! haw! haw!"

Jack colored; he had on an old overcoat of the farmer's, but the red sack was under it, for he had no other coat.

"Well, anyhow, here's a bundle for Jack Parry, and I reckon that's for you, since nobody else called for it; and it's got a kind of a label on to the tag, same as letters: 'Return to James Agard & Co., Deerford, Conn., if not called for in one month.' And the month's a'most up, too,—it's a nigh thing for you."

Jack did not know what to think or say. He signed a receipt for the bundle, put it up on the coal, and hastily went on his way.

He did not get home till after dark, and when supper was over and all his work done he could only go to bed and wait for morning, as he never was allowed a light in his loft, and he did not want to open the package until he was alone. But with the first dawning light he sprang up eagerly and untied the string. There lay the gray coat, and with it the rest of the suit, a set of warm underclothing, and, on top of all, a letter running thus:

"DEERFORD, CONN.

"JACK PARRY: I am glad there is such an honest boy in Dayton. I wish there were more here, but we want you for another, anyway. If you are out of work, and I think perhaps you are, for I know how it is round the burnt districts, you will find money in the breast pocket of your coat to buy a ticket for this place. James Agard & Co. want a boy in their store, and want an honest one. Come promptly, and bring this letter to identify yourself. JAMES AGARD, JR."

"Oh, if mother only knew it!" was the quick thought that glistened in Jack's happy eyes, and choked him for a moment, as he laid down the letter.

Perhaps she did.

He is in Agard & Co.'s great wholesale store on the Deerford wharves now, and does credit to James Agard, Jr.'s recommendation.

And it all came of sending the wrong coat.—*St. Nicholas.*

Grist-Mills of Minneapolis.

Minneapolis is now a town of some 50,000 people; she is growing rapidly, and, I think, in a healthy way. Her natural advantages of location are very great, both for business purposes and as a place of residence, and she has a rich farming region, developing with surprising strides to give a market to her wares in exchange for its crops and animal products.

Minneapolis is known not only in the United States, but widely out of it, for its grist-milling industries, which it owes to the magnificent water-power afforded by the falls. It seems incredible that away off in this far Northwest, where even yet the native Indian comes strolling about the street in half-savage toggery, and the echo of the pioneer's axe is scarcely lost, structures so towering should be devoted to manufacture, and so much elaborate machinery be at work day and night. There are twenty-one mills, nearly all enormous stone buildings, closely crowded together, forming a locality which recalls the denser portions of Fall River or Lawrence, with their huge cotton factories. The heaviest owners are Mr. G. A. Pillsbury, with four mills, and Governor C. C. Washburn, the owner of three. To the kindness of the latter gentleman I owe the opportunity to see the working of the improved processes of modern flour-making in his new "A" mill, which is said to be the largest in the world, except one at Buda-Pesth.

The wheat to feed this mill, as well as all its neighbors, comes chiefly from the Red River region, where are those township wide farms that have been so often described of late. The receipts at Minneapolis from June, 1879 to June, 1880, were 8,103,710 bushels. As only 80,000 bushels were shipped away during that time, it appears that over 8,000,000 bushels were turned into flour here.

When the wheat comes in it is unloaded from the cars by the aid of steam shovels into a hopper bin, whence it is elevated to the fifth floor and fed into a receiving bin, the bottom of which extends down to the fourth floor. Out of this it empties itself into conveyers, consisting of small buckets travelling upon an endless belt and is taken to storage bins on the first and second floors. Here it rests until wanted for milling. When this time comes the wheat travels by conveyers to the top (eighth) floor, whence it is fed down into the grain separators in the story beneath, which sift out the chaff, and other foreign matter. This done, it descends another story upon patented grading sceens, which sort out the larger-sized grains from the smaller, the latter falling through the meshes of the screen, after which the selected portion drops into the cockles on the floor beneath, and, these escaped, falls still further into the Brush machines. All this time the wheat remains wheat—the kernel is entire. Its next move, however, begins its destruction, for now the ending-stones, are encountered, which break the germinal point off each grain. This matter accomplished, the wheat is shot away up to the attic again, and traversing the whole length of the mill, falls into an aspirator on the seventh floor, having passed which, it slides down to the second floor, and is sent through the corrugated rollers. These rollers have shallow grooves cut spirally upon them, with rounded ridges between. The opposing rollers are grooved in an opposite direction, and it is impossible for a grain of wheat to get through without being cracked in two, though the rollers are not sufficiently near together to do much more than that. It comes out of this ordeal looking as though mice had chewed it, and pouring into special conveyers, speedily finds itself up on the seventh floor again, where the flour-dust which has been produced by this rough handling is bolted out in reels, and all that is left—no longer *wheat*—is divided into "middlings" and "tailings." The tailings consist of the hard seed case and the refuse part, and go into the market as "feed" and "bran," while the middlings are reserved for further perfection into flour; they are the starchy, good centres of the grains.

The first operation toward this end is the grading of the middlings, for which purpose they pass upon silken sieves arranged in narrow horizontal troughs, and given a gentle shaking motion by machinery. There is a succession of these bolting-cloths, so that the middlings pass through ten gradings. Next they go to a series of purifiers, which resemble fanning-machines, and thence to corrugated rollers, each successive set of which are more than closely apposed, where the meal is ground finer and finer. There are five of these corrugations in all, and between each occurs a process of bolting to get rid of the waste, and a journey from bottom to top of the mill and back again. Nevertheless, in spite of all this bolting, there remains a large quantity of dust, which must be removed in order to make the flour of the best quality. And hereby hangs a tale of considerable interest to Minneapolis men.

In the old mill which not long ago occupied the site of this new one there stood upon one side the usual rows of buhrs, in this case twenty in number. Through the conveyer boxes connected with them was drawn a strong current of air that took out the fine particles of flour-dust, and wafted it with the strength of a tempest into two dust rooms, where it was allowed to settle. The daily deposit was about three thousand pounds, which was removed every morning. In addition to these small chambers there were several purifiers on the upper floors that discharged their dust right into the room. The atmosphere of the whole mill thus became surcharged with exceedingly minute and fuzzy particles, which are very inflammable, and when mixed in certain proportions with the air, highly explosive. This mixture had apparently been brought by the millers to just about the right point, when fate supplied a torch. A piece of wire fell between the buhr-stones, or into some rollers, and began a lightning express journey through the machinery, in the course of which it became red-hot, when it found an exit, and plunged out into the air, It was a most startling instance of the conversion of heat into motion. A lighted match in a keg of powder is the only analogy to illustrate the result. One room down-stairs burst into flames, and the watchman had only time to pull the electric fire alarm near his hand when he and the mill together dis appeared from the face of the earth. A terrific explosion, generated throughout that great factory in an instant, rent all parts of that immense structure as suddenly as a child knocks over a tower of cards, leaving nothing but blazing ruins to show where, a twinkling before, had stood the largest flour mill in the country. Nor was this all. The land was dug from under the foundations and the massive machinery was buried out of sight. Two other mills and an elevator near by were demolished so that not one stone remained above another, while of three other mills cracked and tottering walls and charred interiors were the only mementos of the day's flourishing business.

The good that came out of this seemingly wholly harmful episode, which scratched an end mark to one era of the city's prosperity, was the introduction into the new mills of a system of dust-saving that renders such a calamity, improbable if not impossible in future. Now, instead of being thrown abroad into a large room, the dust is discharged by suction fans into close fire-proof receivers, where it accumulates in great quantities, and is sold as a low grade of flour. This dust having been removed, what remains is the best quality of flour. It is barreled by the aid of a machine permitting the precise weight of 196 pounds to be determined, packed, and branded with great speed.

Bakers, however, use what is known as "wheat" or "straight" flour, which is the product of the five reductions, all the subsequent processes through which the middlings pass in making fine flour being omitted. "Fancy" flour differs from the ordinary superfine in that the middlings are ground through smooth rollers.

Minneapolis is reported to ship annually, beyond her local consumption, 1,650,850 barrels of flour. "These," says the *Tribune's* statistician, "if piled one above the other, end to end, would reach 780 miles. The flour would make about 495,255,000 loaves of bread the ordinary size of bakers' loaves. Theee piled in pyramid would make, roughly calculated, a square pyramid with a base 300 feet square and with a height of nearly 1000 feet."—*Harper's Magazine.*

MORTGAGE FORECLOSURE.—Whereas default has been made in the conditions of a certain mortgage bearing date the first day of March, A. D. 1880, executed by Charles A. Towar and Almira R. Towar, his wife, of Springwells, Wayne County, Michigan, to Mary Knoch and Fritz Knoch, of the City of Detroit, County of Wayne and State of Michigan, and recorded on the 2d day of March, A. D., 1880, at 9:20 o'clock A. M., in liber 157 of mortgages, on page 102, in the Register's office for Wayne County, Michigan, which said mortgage was duly assigned by said Fritz Knoch and Mary Knoch to Joseph Kuhn, by indenture dated August 24, 1880, and recorded March 16, 1883, in liber 21 of assignments of mortgages, on page 412 in the aforesaid Register's office for Wayne County, Michigan, and there being claimed to be due at the date hereof, the sum of two hundred and five dollars and 34-100 cents, ($205 34-100), and no proceedings at law or in equity having been instituted to recover the same or any part thereof: Notice is therefore hereby given, that by virtue of the power of sale in said mortgage contained, I will sell at public auction or vendue to the highest bidder, on SATURDAY, THE TWENTY-FIRST DAY OF JULY, A. D. 1883, at eleven o'clock in the forenoon of the said day, at the east front door of the City Hall, Detroit, that being the building in which the Circuit Court for the County of Wayne is held, the premises in said mortgage mentioned and described as all that certain piece and parcel of land lying in the township of Nankin, County of Wayne and State of Michigan, known as the Inkster Mill property, and more particularly described as follows, to wit: Bounded on the north by the Michigan Central Railroad, on the east by the town line, on the south by land formerly owned by Sims, and on the west by Reynolds' place, the same being two (2) acres on the E. ½ of the N. E ¼ of section 25, town 2, south of range 9 east, located in the angle formed by said railroad and said town line as aforesaid, to satisfy the amount due at the date hereof, the interest accruing, and the costs and expenses allowed by law in case of a foreclosure.

Dated Detroit, this 23d day of April, A. D. 1883.
JOSEPH KUHN,
WILLIAM LOOK, Assignee of Mortgagees.
Attorney for Assignee.

STATE OF MICHIGAN. In the Circuit Court for the County of Wayne. In Chancery.

At a session of said Court, held in the Court Room in the City of Detroit, on the 24th day of April, 1883. Present, Hon. Wm. Jennison, Presiding Circuit Judge. Hattie Lowe, Complainant, vs. John Lowe, Defendant. It satisfactorily appearing by affidavit that the defendant, John Lowe, resides out of this State and in the State of Ohio, on motion of Babcock & Thompson, solicitors for complainant, it is ordered that the said defendant cause his appearance to be entered in said cause on or before Saturday, the first day of September, 1883, and in default thereof the bill of complaint filed in this cause be taken as confessed, and also that the said complainant shall cause this order to be published within twenty days from the date hereof in the MICHIGAN FARMER, a newspaper printed and circulated in said County of Wayne once in each week for six weeks in succession.

WM. JENNISON,
Circuit Judge

A true copy:
WILLIAM P. LANE, Deputy Register.
m1-6t

STATE OF MICHIGAN, } ss.
COUNTY OF WAYNE,

In the matter of the estate of Alexander Picard, deceased. Notice is hereby given that in pursuance of an order granted to the undersigned, Lucretia Picard, administratrix of the estate of said Alexander Picard, deceased, by the Hon. Edgar O. Durfee, judge of the Probate Court for the County of Wayne, on the 17th day of April, 1883, there will be sold at public sale to the highest bidder at the westerly front door of the City Hall, in the City of Detroit, Wayne County, Michigan, on the 7th day of July, 1883, at ten o'clock in the forenoon of that day, the following described real estate, to wit: Lot 105 and the south half of lot 106 of Moses W. Field's subdivision of private claim 16, in the Township of Hamtramck, Wayne County, Michigan.

DETROIT, May 15, 1883.
LUCRETIA PICARD, Administratrix.
CORLISS & ANDRUS, Attorneys m22-6t

Farm Matters.

MUTTON SHEEP vs. MERINO.

LOGAN, N. Y., April 13, '83.

To the Editor of the Michigan Farmer.

In your editorial comments on my letter published in the FARMER of April 3d, I fully concede and agree with all that you call "cold facts," and admit all except that part in which you say: "Our correspondent hardly talks by the card when he states that the continued use of pure bred Merinos has detracted from the value of Michigan flocks, or that they are less sought after by feeders from the eastern states." As to the first part of the statement, I know nothing about any *card* being played, or any *game* of cards. If the editor of the FARMER is engaged in some Merino card game, or playing a certain card to help certain Merino breeders of Michigan, it is his and their business, and I have nothing to do with the game. I said, as my letter in your columns shows, that the continued use of Merino rams had the effect of deteriorating the mutton value of their flocks," and not as you state it, detracted from the value of the flock. No one of common sense believes but that the use of pure bred Merino rams in a flock of inferior poorly bred, light shearing sheep, will improve the wool value of the flock, and produce an offspring superior in every respect to its dam; but it by no means proves that the offspring would not have been far superior to the one produced is a Shropshire ram had been used instead. I repeat what I stated, that the continued use of Merino rams has had the result of deteriorating the mutton value of a large number of the flocks of Michigan, and your statements prove it. In your issue of March 27th you state "it looks as though Michigan sheep would hardly reach the prices of 1882," but advise your readers to hold on, as there are better prospects in the future. You state in your comments on my letter: "It is a positive fact that never were feeders in greater demand by New York parties than during last fall," (which statement I also say is a positive fact.) You also state as a fact that many of them could not get all they wanted and were obliged to go elsewhere, which statement I also believe to be a fact; and would only add they sought for them in Michigan, could not find them, went further and got what they wanted. The reason why they went elsewhere, was simply because Merino rams had been used to improve the flocks of Michigan, to the extent of rendering it impossible for eastern buyers of first class feeding sheep to find them in quantities to supply the demand. Your report of the Buffalo market for Oct. 28, 1879, 1880, 1881, 1882 of the sale of Michigan sheep fit for the market at 90 lbs. weight, and only one lot of 76 that reached 121 lbs. and some as low as 75 lbs., selling on an average for about 4½ cents per pound, is it anything to be proud of? Does it show that the mutton interests of Michigan are improving or declining, when to my certain knowledge, in October, 1877, over 2,000 feeding wethers were bought in central Michigan by one man, that weighed when they reached Buffalo, 126 lbs., and sold for 5c per lb.; in 1876 about the same number were bought by the same man in the same locality, and in 1878 1,000 wethers were bought in Michigan for which 5c per lb. was paid the owners there on the average, that when brought to my own farm and fed until the first day of March, weighed 159 lbs. and sold for 8c per lb. It must be that, as the clipping taken from a western paper you seem to take pleasure in publishing says, "they have come and gone." At any rate eastern buyers can't find them in Michigan in sufficient numbers to meet the demand. You speak in your comments of "the much abused Merino." I cannot conceive of what you call abuse, without it consists in the fact that many times their owners literally soak their fleeces in lampblack and oil, to make them shear heavy fleeces at public shearings, and thereby gull those that are uninitiated. No breed of sheep on the face of the earth has ever had such an amount of printer's ink expended upon them; and if they have ever been abused in that direction it must be in the misrepresentations made in relation to mutton qualities which they never had.

You say that in Michigan the Merino sheep is a necessity to the successful farmer. That seems like a broad assertion, and in order to prove it you will have to show that every flock-owner, in order to be successful will have to get Merino sheep. Now just model it over a little, and say that in order to make the business of present breeders of pure bred Merino sheep a success, the farmers in general of Michigan must be made to believe that the only way in which they can ever hope for success is to purchase pure bred Merino rams for use in their flocks; and the press of Michigan must keep crying wool, wool, wool, until the flock-owners of the State can see no money in a sheep, except the wool that grows on its back. Please allow me to say, without being considered impertinent, Mr. Editor, that you nor any one who understands anything of the principles of breeding believes that the continued use of Merino rams will improve the mutton value of any flock, for the simple reason that the Merino having been bred for nearly a century with one specific object in view, viz., wool, will no more improve the mutton qualities of Michigan flocks, than the use of pure bred Jersey bulls would improve the beef qualities by being used in your Michigan herds of cattle; and it is no more a necessity for the breeders of sheep in Michigan to all breed Merinos, to be successful, than it is for them all to breed Jersey cattle. When mutton and beef are to be produced the use of either is simply foolishness.

DOC. SMEAD.

One voice all over the land goes up from mothers, that says, "My daughters are so feeble and sad, with no strength, all out of breath and life at the least exertion. What can we do for them?" The answer is simple and full of hope. One to four weeks' use of Hop Bitters will make them healthy, rosy prightly, and cheerful.

Drainage of Clay Lands.

A correspondent of the *Indiana Farmer* who has had considerable practical experience in tile draining, says:

"It is observed by an experienced agriculturist in the west of England that in dealing with strong clay lands, the first thing to do is to dig trial holes on several places of each field, and at depths varying from three to four or five feet. These should be narrowly watched for some time before deciding on the necessary depth at which the pipe should be laid. This question of depth cannot be fixed in any arbitrary way, as so many different qualities of clay present themselves, and each requires special treatment. In pure plastic clay, which shrinks much in drying, and where you cannot get good drainage strata at a reasonable depth, three feet or three feet six inches may be a proper depth for arable land, and the drains should not be more than six or eight yards apart.

"Should you, however, be enabled to get into a good water-bearing stratum at four or five feet deep, by all means go the extra depth, or the drainage will certainly be unsatisfactory on the majority of lands. Strong clays drained four feet should be eight yards apart, and five feet work 12 yards apart. The foregoing remarks apply to arable land only.

"Meadow or pasture land should in no case be cut less than four feet deep, and is often better when cut five feet deep, as the land will be more evenly dried, and a better and more even herbage obtained.

"Having decided the depth, a good outfall should be obtained at any cost, and this should be maintained in the best possible manner, with a large cast iron plate to keep up the bank or brick-work, and a long length (not less than six feet) of cast-iron pipe, to reach well through the hedge or bank, and a fall of at least 12 inches should be got from the pipe to the water-level of the ditch or other outlet.

"The next important matter is the main, which should be laid out with an even fall along the lowest part of the field; and if any sub-mains are necessary, inspection wells should be placed at the junctions if practicable.

"Now lay off the branches straight up the fall, so as to give each side of the drain its work to do, and to cut all water-bearing strata as nearly at right angles as possible.

"A most important matter is the junctions between main and branch drains. The centers of each pipe should intersect, and the branches should be laid at an angle sloping with the fall of the main. These junctions should be made with the best glazed socket pipe junctions, and not cut out of common drain pipes in the usual slovenly manner, as the junction is the weakest place in the whole system of drainage.

"The pipes should be carefully laid by an experienced pipe-layer, and not a single pipe should be laid which has not a solid and properly formed bed. The pipes should be laid from the top downwards when practicable, but this is so rarely the case that the usual method has to be followed, or the weathering of the drain would be a serious drawback. In no case should a pipe of less diameter than two inches be laid, and when the branches are long the lower end should be two and one-half inches in diameter. All drainage, however complicated, should be accurately platted to scale on a correct map of not less scale than three chains (198 feet) to an inch. By this means, any defect would be at once discovered and cheaply rectified. Or if a spring should show itself in after years, it would be easily distinguished for a stoppage, and the record will well repay the small amount of trouble and expense it incurs."

Broom Corn.

A Georgia grower furnishes the *N. Y. World* the following on the mode of planting and harvesting broom corn:

"In the cultivation of broom corn the ground should be thoroughly broken with a two-horse turning plow in the fall season, so as to secure all the benefits of the winter frosts, and left in that state until the month of April, when it should be again plowed and thoroughly pulverized. As soon of danger of frost is over the land can be laid off in rows two or two and a half feet apart, according to to the land, with a scooter plow, thus giving the land another working and making it in good condition for receiving the seed which can be sown with a common seed drill, at the rate of about three pints to the acre.

"Now as to the cultivation which is necessary, the more work it receives the faster it will grow, and consequently the sooner it will be off the ground and ready for the market. When the plants reach the height of four or five inches it should have a good plowing, and immediately after the hoes should be put in to chop it out, leaving some two or three inches for a hill undisturbed. In two or three weeks it should again receive a good, close plowing and final hoeing, when the hills left at the first hoeing should be cleaned out to one or two stalks at the most, choosing the most vigorous, of course, which would leave the stalks about every eight inches. At the last plowing, which should be two or three weeks later, according to the judgment of the farmer, the dirt should be thrown well up to the plant. A three-hoed cultivator has been found very serviceable by the writer in taking care of the crop.

"The next thing to be considered is the mode of saving or harvesting the crop, and any carelessness or mismanagement at this point is very liable to take away all the profit of the foregoing cultivation. The first point with the manufacturer is color. It matters not how good a growth the crop may be, if it is red from too long standing in the field or dark from mould or wet its value is damaged. It should be saved while green and cured with a view of preserving it in that color. Just as soon as the milk in the seed thickens and becomes doughy and starchy, cut it, leaving six inches of the stalk with the brush. It should be gathered the same day as cut and threshed, as the weight of the seed will soon cause it to heat and stain the brush if allowed to lie in piles any length of time. It should then be placed on racks or scaffolds not over four inches thick in the layers, with a space of six or eight inches between layers, in an open shed or shelter, care being taken to keep it dry. It should be shaken up in the layers once or twice in two or three days, according to the weather, so as to insure a free passage of air. In two weeks of fair weather it is ready to be baled up and sent to market."

Fermented Corn and Ensilage as Food for Stock.

Prof. L. B. Arnold, in the New York *Tribune*, says, decidedly and rightly:

"The refuse of glucose factories is decidedly bad stuff for milk. It is not vitiated, as many suppose, by the use of sulphuric acid employed by the conversion of starch into sugar, for the acid is not applied to the starch till after it has been separated from the corn. But the corn is soaked in warm water for about two days, and thus becomes stale, if not actually sour, before grinding. Upon grinding, the starch is quickly washed out and the refuse at once deposited, wet, in huge masses, and fermentation begins immediately, before it can be used, and goes on with great rapidity. Fermentation implies acid and alcohol, which never make good milk. They injure it for the use of infants and invalids; spoil it entirely for condensing, whatever the food in which they are mingled, and depreciate it for both butter and cheese. I have repeatedly proved this in regard to sugar meal.

"The same is true with respect to barley 'grains,' distillers' slops, and badly preserved ensilage is always sour. The degree of acidity and quantity of alcohol developed depend upon the amount of air permeating it. All that relates to ensilage and silos is steadily coming to a common-sense level. The extravagant claims of eighty and ninety tons of fodder corn to the acre have been toned down more than half, and the idea that though it is known from its lack of flesh-forming matter to make an imperfect ration in its normal condition, it is, by some hocus-pocus in the silo, converted into a perfect and well-balanced food, is giving way to the more sensible opinion that fodder-corn in a silo is as one-sided as it is ont, and that variety in ensilage is just as important as in other fodder.

"The exact tests which have been made of its feeding value have none of them placed it higher than the same food dried or fed from the field, while some have made it lower, and the crucial tests of the effects upon the quality of milk have shown it to be inferior to the same food fed sweet instead of sour. Sieme long ago established the fact that fermentation is a process of decay and decomposition, and that it not only never increases the life-sustaining power of the substance fermented, but diminishes it. If the silo is very tight the acid and alcohol are in such small quantity as not to be very objectionable, and the experience of a majority of experimenters agrees in sustaining the best modern silo as a cheap and efficient means for preserving green vegetation for winter use in a state but little inferior to its normal condition."

Carbolic Soap for Lice on Live Stock.

The following, floating about among our exchanges without a name, may be of use to some farmer whose stock is covered with vermin:

"To destroy lice on live stock there is nothing better than strong carbolic soapsuds. The soap usually sold under the name is not strong enough for the purpose. It may be easily prepared and at any degree of strength that may be required. Get a pound of carbolic acid crystals, which may be had at any wholesale druggist's, usually at a cost of sixty cents per pound. Take ten pounds of common bar soap, put in a pan with a little water and heat until dissolved. Take out the cork from the bottle containing the acid, and put it in hot water, which will cause the acid to become fluid, add this to the soap and stir well. Set away to cool and you will have a soap at small cost which will be strong enough to kill any vermin which infest domestic animals, and which will cure barn itch and any cutaneous diseases to which they are liable. It is good to cleanse and heal sores, and a wash of it will be found good where animals are hide-bound and the skin out of condition; it will be found good to wash the inside of poultry houses to render them sweet, and kill and prevent vermin. It is a cheap, safe and sure remedy, and should find a place in all well regulated premises."

Another Grain Pest.

San Francisco papers state that within the last two weeks a grain pest has made its appearance in Alameda, Contra Costa, Santa Clara, Santa Cruz, Monterey, San Mateo and Sonora counties. The insect at first is a small dark-green louse, but in a day or two develops into a fly with gauzy wings and somewhat like those seen on cabbage-leaves and rose bushes. A stalk of wheat blades which was well covered with the pest was taken to Prof. Norton, of the San Jose Normal School. He declared that the pest was the *aphis avena*, a vegetable louse which propagates once a year, and increases many thousand fold. If left to themselves they would rapidly eat up everything in the country, but fortunately they have many enemies, chief of which is the chrysopa, a green beetle that lays larvæ which prey upon the aphis. The larvæ when once hatched out liberally may be counted on to devour all the lice and flies, and a singular fact is that they invariably appear soon after the wheat pest. Prof. Norton said a field of wheat might be destroyed, but the beetles could be counted to keep the pest from spreading. He also declared that he had found the same pest in Humboldt county a few years ago. The bull element in produce exchange is making capital out of the scare about this bug, declaring that if it becomes general throughout the State the crop will be entirely swept away.

Transplanting.

The North Carolina *Farmer* says:

"There is a principle in transplanting cabbage and other succulent plants which is unknown, or overlooked by many parties. They seem of the opinion that the sooner a plant is reset after being taken from the seed bed the more sure it is to live. A moment's thought will show the fallacy of this idea, if it does not a little practice will.

"The plant gets its supply of moisture and sustenance from the soil by means of numerous small mouths at the extremities of fine rootlets. When the plant is removed from its seedbed, more or less of these are of necessity broken, and the evaporation is continually going on from its leaves more or less rapidly according to the degree of heat and sunlight it is ade to stand. If transplanted at once it follows that the plant must of necessity wilt badly, and if the weather is hot and soil dry it may never survive. If, however, on being removed it has its roots 'puddled' in muddy water and is then laid in a cool, moist place, in from 12 to 48 hours numerous small white rootlets will be formed, the leaves will stiffen up and every energy of the plant is set at recovery. In other words the plant is convalescent, and if given half a chance for its life will commence growing with renewed vigor. For these reasons, plants which have been well packed and transported considerable distances by express will often wilt less on setting, and start to growing sooner than those which are reset at once when taken from the seed bed."

The Poultry Yard.

Fanny Field on Turkeys.

Fanny Field, in the *Ohio Farmer*, gives the following instructions for the care of young turkeys:

"After you get your turkeys out of the shell you have only to give them proper food and keep them warm and dry. Improper food brings on indigestion, and when a young turkey's digestive apparatus gets out of order he is a hopeless case. Exposure to damp and wet gives them chills and cramps, and when they are thoroughly chilled they are apt to die before you find out what ails them.

"Provide a dry coop and pen for the mother hen and her brood, and confine them to the coop and pen nights and rainy days. Do not let the hen out mornings until after the dew is off the grass, and if she gets caught out in a shower make all haste and get your little turks under shelter as soon as possible. After they are fully feathered and have thrown out the red on their heads you may allow them free range in all kinds of weather.

"Until after they have thrown out the red never give young turkeys any uncooked food. A strict adherence to this rule would double the chances of raising turkeys. For the first two weeks feed hard-boiled eggs, cottage cheese and stale wheat bread crumbs moistened with milk. The third week you may commence feeding cooked corn meal, boiled potatoes, etc., and when you quit feeding the boiled eggs add a little cooked beef to their bill of fare two or three times a week, until they begin to forage for insects. Until they commence to pick the young grass, give onion tops or lettuce chopped and mixed with their food once a day. Give milk to drink, and keep fine gravel where they can help themselves. Bone meal, a tablespoonful to a pint of food once a week will be found beneficial.

"Feed your turkeys five or six times a day until they are three months old; after that age they will thrive on two meals a day."

Lime for Hen Houses.

Through the summer months the hen houses should have a thorough cleaning out once or twice. Before cold weather sets in, if there are any doubts as to the cleanliness of the house, it should be gone over and done. In the first place remove all the droppings from the house and sweep the floor clean. Then sprinkle air-slacked lime and ashes thickly thereon. Wash all the perches (after all patches of manure have been scraped off) with boiling lime whitewash, put on with an old brush, and carefully worked and rubbed into the cracks, being careful to cover every part of the roost thoroughly. Lime is the greatest cleanser and purifier known. Any one at all acquainted with insects would not for a moment think of smoking them out with brimstone. A thorough cleansing must be gone through with twice each year. After the floor is cleaned, the siding, nest-boxes, perches and every appurtenance belonging to the inner building must be thoroughly whitewashed before a riddance of the pests can be effected. They dread whitewash; and delight and revel in filth. Use strong unleached wood ashes, if they can be had, and keep the floor dry and covered with them. If not employ quick-lime. If the droppings are dried up immediately, their living is gone.

Skimmed Milk for Hens and Chickens.

There is nothing better for laying hens in the spring than milk, after the cream has been taken off. We have tried it several seasons with complete success. With the milk given fresh from the dairy room every day, the fowls will need no other drink, and it will supply everything required in the way of animal food. The pullets fed with milk and corn, and a mixture of corn meal and milk, through the cold weather, have given an abundant supply of eggs. Wheat bran is also a good article to mix with the milk. It is better to give the mixture a boiling and to feed it in the warm state, but this is not necessary. We have also found the milk one of the best kinds of diet for young chickens, soon after they come from the nest, to promote their health and rapid growth. Indian meal, ground coarse, and scalded with milk, is a perfect feed for them. As they grow older, grass, cabbage or onions may be chopped fine and added to the daily rations. A portion of the milk on dairy farms, usually going to the pig trough, may be diverted to the chicken coop with great advantage. Eggs are worth twenty cents a dozen, and poultry twenty cents a pound, when pork brings but ten cents a pound in the market.—*American Agriculturist.*

Feeding Young Chickens.

Fanny Field says on this subject: We begin with hard boiled eggs and stale bread moistened with milk. After a few days of this we feed cooked oatmeal, corn meal, and cooked potatoes, and as soon as they can swallow the grains, cracked corn and wheat. We feed every two hours for the first week, and afterwards five times a day. The early chicks that are kept in doors are supplied with gravel and green food, and all our chicks, early and late, have all the milk they can drink. Occasionally we give a little cooked meat, but with the milk it is not absolutely necessary. All the food is slightly seasoned with salt, and an occasional dose of pepper in the food will tend to prevent gapes. Twice a week we feed bone meal at the rate of a heaping tablespoonful to a pint of cooked food.

The coop for young chicks must be dry, free from vermin, and should often be moved to a fresh spot of ground.